2C	.\													
2002	1911 1919			٤					10					15
RAURA	Fhe	Lys	Ser	Val	Lēti	ieu	Ile	Туг	Thr 25	The	Hle	Phe	Trp	Ile 30
Thi	Gly	Val	Ile	I e-1 3 f	Leu	Ala	Val	Gly	lle ;()	Trp	Gly	Lys	Val	Ser 45
1.+-11	Glu	Asn	Tyr	Fhe Su	Ser	Leu	Leu	Asn	Glu	Lys	Ala	Thr	Asn	Val 60
Pro	Phe	Val	Leu	11e 65	Ala	Thr	Gly	Thr	Val 70	Il€	Ile	Leu	Leu	Gly 75
Thr	Phe	Gly	Cys	Ehe श्रम	Ala	Thr	Cys	Arg	Ala X5	Ser	Ala	Trp	M⊖t	Ьец 90
Lys	Leu	Tyr	Alā	Met 95	Fl.e	Leu	Thr	Leu	Val 100	Fh€	Leu	Val	Glu	Leu 195
Val	Ala	Ala	Ile	Val 110	Gly	Phe	Val	Phe	Arg 115	His	Glu	Ile	Lys	Asn 110
Ser	Pho	Lys	Asn	Asn 125	Tyr	Glu	Lys	Ala	Leu 130	Гλε	Gln	Tyr	Asn	Ser 135
Thr	Gl;	Asp	Tyr	Arg 140	Ser	His	Ala	Val	As p 145	Lys	Ile	Gln	Asn	Thr 150
Leu	Hir	Cys	Cys	3 <u>-</u> 5	Val	Thr	Asp	Tyr	Arg 160	Asp	Тгр	Thr	Asp	Thr 105
Asn	Tyr	Tyr	Ser	Glu 170	Lys	Gly	Phe	Pro	57 <i>5</i> 175	Ser	Суѕ	Cys	Lys	Leu 180
Glu	Asp	Суѕ	Thr	Pro 185	Gln	Arg	Asp	Ala	Asp 190	Lys	Val	Asn	Asn	Glu 195
Gly	Cys	Phe	Ile	700 Lys		Met	Thr	Ile	11e 205		Ser	Glu	Met	Gly 210
Val	Val	Ala	Gly	Ile :15	Ser	Phe	Gly	Val	Ala .20	Cys	Phe	Gln	Leu	11e .25
Gly	Ile	Phe	Leu	Ala :30	Tyr	Cys	Хаа	Ser	Arg 1.35	Ala	Ile	Thr	Asn	Asn 140
Gln	туг	Glu	Ile	Val 245										
<216	7 5 0 101	ıΩ												

<211% 1218
<212% DNA
<a href="mailto:color:blue;"><213 \* Homo sapiens</a>

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dicama aaygkuinin dobinnigoni oodonohiti hintooyytyy 120
    nggang nagagalant captocolou ghocyanigh gitgototga 150
     thygia cycygaacyd gaddgagtot gaggyttggy yacgtofgtg 200
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  49 stägye totgyaaagg gooogggaga gäggtygngt tggteagaae 治的
ा त्राप्तबबब्द्य googagaggt tttocacoga ggocogoget tgagggatet ४५०.
Malifaggiti diagaagagg gigitoodic titogggggt ooloabbaga 400.
 Equipation gggggtouse offetgagga ggetgegget aasagggees 450.
adaactqoca ttigatqtos aqaatoocst qtaqttqata atqttqqqaa 500-
tasdototgo aastttottt qqpattoagt tqttaaaaas asataggatg 550-
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oggocacoai ggaggggoog aggacitoat gagocaagga gaaagaaaca 900
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fagataasta agtatotgad toacgytoas otocagtgga atgaaaagtg 1000
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otogopaag: cttgtgctca cagggcaaag gagaatattt taatgctccg 1100
stgatggcag agtaaatgat aagatttgat gtttttgctt gctgtcatct 1150
actitytoto gaaatytota aatytttoty tagoagaaaa cacgataaag 1200
intargation tartagag 1218
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<sup>&</sup>lt; 710> 6

<sup>1.11&</sup>gt; 117

<sup>1.1</sup> PRT

<sup>1132</sup> Homo sapiens

<sup>· ...20.</sup> 

<sup>+</sup> L/1 = rig\_pertide

<sup>· 2.... 1-16</sup> 

<sup>-22 -</sup> Jimnal Tertile

```
Mass feature
a... 18-34, 32-38, 34-40, 3
%23 - N-Myristaylatian Site.
      16-34, 32-38, 34-40, 31-41, 51-57
- 2211 .
-201 · misc feature
5224 \cdot 32 - 26, 50 - 54, 113 - 117
 2. proasein Kinase II Phosphorylation Site.
4:0, 6
 More Ile Val Fhe Gly Trp Ala Val Fhe Leu Ala Ser Arg Ser Leu
 Sly Gin Gly Leu Leu Thr Leu Glu Glu His Ile Ala His Fhe
 Leu Gly Thr Gly Gly Ala Ala Thr Thr Met Gly Asn Ser Cys Ile
 'ys Aig Asp Asp Ser Gly Thr Asp Asp Ser Val Asp Thr Gln Gln
 Gln Gln Ala Glu Asn Ser Ala Val Pro Thr Ala Asp Thr Arg Ser
                   65
 Glo Pro Arg Asp Pro Val Arg Pro Pro Arg Arg Gly Arg Gly Pro
                   8.0
```

80 65 30

His Glu Frc Arg Arg Lys Lys Gln Asn Val Asp Gly Leu Val Leu
95 100 105

Asp Thr Leu Ala Val Ile Arg Thr Leu Val Asp Lys
110 115

<.10> 7 <211> 756 <212> DNA <213> Homo sapiens

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qaggtecegg tteetaaegg actgeaagat ggaggaagge gggaacetag 150
qaggtecegg tteetaaegg actgeaagat ggaggaagge gggaacetag 150
qaggteefgat taagatggte catchactgg tettgteagg tgeetgggge 200
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tbeecgacat acctteggae tagtgeagag cabactette cecttetaet 300
toeacatete catgggefut gretteatea acctetgeat eftggettea 350
falfafgett ggifteaget eacattetgg gaggenalee agetttaeet 400
printing aggetgaet fogeactgt baakingage tggetggaae 450

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or rate reen eight gastetal turangar ag leesak at bas labbaggegaga 100-
 garetagata aggraggiaco aggerago no magatocom atopotacog 550
  posyctycya dadaaggaed hoaaytanig tichntingo dagaathtet 600
 thegotabba foodetytee totetttyea atotoggoty egitertuade 650
  autagactor atotogorias contacceta asaataagaa goototagoa 700
 tуу юросцо atgotaataa atgottotto agaaatgaaa амаамаама 750
 авы аа 756
 210 3
 211 - 189
+ .11.1 + PRT
 2 13 - Homb sapiens
(2.20
171 sig peptide
2727 1-24
213 Signal Peptide
 210
711 misc_feature
21. 4-10, 5-11, 47-53, 170-176, 176-182
 Illa - N-Myristoylation Site.
- 111
 2.1 mile feature
 ____ 44-35
-... 5-protein Coupled Receptors Froteins.
+ \left( \frac{1}{2} \left( \frac{1}{2} \right)^{2} \right) \left( \frac{1}{2} \right) +
 2.1 mi.c feature
+ 1. . ! + 54-65
All 3 Prokaryotic Mmembrane Lipoprotein Lipid Attachment Site.
 220 -
ALI: Casein Kinase II Phosphorylation Site.
\eta_{\omega} = 0
TRANSMEM
-:...: 86-103, 60-75
- ... Transmembrane Demain
4 ....100
This misc feature
+17275 - 144 - \overline{1}51
1. (*) Tyrosine Kinase Phosphorylation Site.
子請り()メータ
 Met Glu Glu Gly Gly Asd Leu Gly Gly Leu Ile Lys Met Val His
```

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Let Lot Var Let Ser Bly Ala Trp Bly Met Glr Mot Trp Val Thr
the Val Ser Gly Phe Lou Leu the Arg Ser Leu Pro Arg His Thr
                                      40
The Gly Leu Val Gln Ser Lys Leu The Pro The Tyr Phe His Ile
                 E_{i}(t)
Ser Met Gly Cys Ala Phe Ile Ash Leu Cys Ile Leu Ala Ser Gln
His Ala Trp Ala 3ln Leu Thr Fhe Trp Glu Ala Ser Gln Leu Tyr
Lei Leu Fhe Leu Ser Leu Thi Leu Ala Thi Val Ash Ala Ard Trp
Lei Glu Pro Arg Thr Thr Ala Ala Met Trp Ala Lou Gln Thr Val
                                     115
Glu Lys Glu Ara Gly Leu Gly Glu Val Pro Gly Ser His Glr.
Gly Pro Asp Pro Tyr Arg Gln Leu Arg Glu Lys Asp Pro Lys Tyr
Ser Ala Leu Arg Gln Asn Phe Fhe Arg Tyr His Gly Leu Ser Ser
                155
                                     166
Leu Cys Asn Leu Gly Cys Val Leu Ser Asr. Gly Leu Cys Leu Ala
                                     175
                                                         130
Gly Leu Ala Leu Glu Ile Arg Ser Leu
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-210-9

...11 - 1508

FRITE DNA

· 213 · Homo sapiens

185

-400% 9
aattoagatt ttaagoocat totgoagtgg aatttoatga actagoaaga 50
qgacaccato ttottgtatt atacaagaaa qqaqtgtaco tatoacacac 100
agygggaaaa atgototttt gggtgotagg chtootaato ototgtggtt 150
thotgtggac togtaaagga aaactaaaga ftgaagacat cactgataag 200
tacatttta toactggatg tgantogage thiggaaact tggcagocag 250
aacttttgat aaaaagggat ttoaturaat ogctgootat otgactgaat 300
naggatcaac agotttaaag gcagaaanor bagagagact toatactgta 350
offntggatg tgangaagoo agagaaanor bagagagact toaagtgggi 400

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saa saa scaalightiggs pas a subtomorty drighted rate laataam poor 4^{\rm FC}
  utatteoogu hafastaant ohvaetaset gaetgammet agagametme ESS
 agagaabota tidaaqtusa ortqtttida otgatoadtq tdacactaaa 550
 tatgetteet ttggteadga aagetedagg gagagttatt aatgteteea 610
 dtg*tgjagg togosttsca atogttsgag ggggotatae tocatocaaa 600
 tatgcagtgg aagutttcaa tgacagotta agacgggaca tgaaaucttt 700
 tygtytycho gtotoatgoa ttgaaccagg attyttoaaa acaaacttgy 750
 cagatocagt amaggiautt gamamamam togocattig ggagemagetg \mathcal{E}(0)
 tot cagada toasachada atatggagaa ggttadattg assasagtot 800
 agalaaabty aaangcaata aatqotatgt gaacatggan otototoogg 990
 tggtagagtg catggascae gototaacaa gtotottooc taagacteat 950.
 tallycogoty gaawagatyo caawattito tygatacoto tytotcacat 1,000
 goolgoagot tigsaagact tittatigit gaaacagaaa goagagotgg 1980
 otautoccaa ggoagtytga otoagotaac cacaaatyto tootocayyo 1100
 tatiaaattg joogattica agaacanato toottitaaa coocaftoni 1150
 tatotgoroc accotygact cattlauato gtgottattt ggattgoada 1.00
 aggragatocc accatogoty gragatatocc aggratocoty ofcasattat 1.750
 ottigaaaag gagggotgga atggtarato acataggoaa gtootgooot 1:00
 gtarttägge ittgeeiget iggigtgaig taagggaaat itgaaagaeti 1250.
 goodattoaa Hatgatottt accgtggoot goodcatgot tatggtoodo 1400-
 ageatttada gtaacttgtg aatgttaagt atcatctett atctaaatat 1450
 панинана 1508
<2107 10
1.11
     31 %
- 1111 PRT
<:13 Homo sapiens</pre>
<1.1(0)-
<0.11 sig_peptide <0.31 \cdot 1-1^{-7}
アルルサ Signal Feptide
+ 220×
Tk21/ misc feature
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+222 + 56-47, 108-115, 156-171,144-2 3, 107-118
endi N-myristoylation Jites.
• 11:0x
.U.1 misc feature
kunan 39-42
4.13 Glygosamir glycan Attachment Site.
< 1 (1)
<!!! TRANSMEM</pre>
<.1721 136-152
<!!!D: Transmembrane Domain</pre>
< 2.100
\leq ....1 \cdot \text{misc feature}
<2.00 + 161 - \overline{1}63, 187-190 and 253-256

Cillo** N-glycosylation Sites.
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Met Leu Phe Trp Val Leu Gly Leu Leu Ile Leu Cys Gly Phe Leu
 Trp Thr Arg Lys Gly Lys Leu Lys Ile Glu Asp Ile Thr Asp Lys
 Tyr Ile Phe Ile Th: Gly Cys Asp Ser Gly Phe Gly Ash Leu Ala
 Ala Arg Thr Fhe Asp Lys Lys Gly Phe His Val Ile Ala Ala Cys
 Leu Thr Glu Ser Giy Ser Thr Ala Leu Lys Ala Glu Thr Ser Giu 65
 Arg Leu Arg Thr Val Leu Leu Asp Val Thr Asp Pro Glu Asn Val
 Lys Arg Thr Ala Gin Trp Val Lys Asn Gln Val Gly Glu Lys G.\gamma
 Leu Trp Gly Leu Ile Asn Asn Ala Gly Val Pro Gly Val Leu Ala
                                       115
 Pro Thr Asp Trp Leu Thr Leu Glu Asp Tyr Arg Glu Pro Ile Giu
                                       1.50
Val Asn Leu Phe Gly Leu Ile Ser Val Thr Leu Asn Met Leu F:o
                                       145
                  140
 Leu Val Lys Lys Ala Gln Gly Arg Val Ile Asn Val Ser Ser Val
Gly Gly Arg Leu Ala Ile Val Gly Gly Gly Tyr Thr Fro Ser Lys
Tyr Ala Val Glu Gly The Asn Asp Cer Leu Ard Arg Asp Met Lys
```

- All Phe Bly Val His Val Cor Cys Ile Glu Fro Gy Lou The Lys 200 - 205 - 210
- Com Ash Leu Ala Asp Fro Val Ly- Vai Ilo Giu Lys Lys Leu Ala 215 - 225
- Gly Tyr Ile Glu Lys Ser Leu Asp Lys Leu Lys Gly Ash Lys Ker .45  $^{\circ}$  .50  $^{\circ}$
- Ala Leu Thr Ser Leu Phe Pro Lys Thr His Tyr Ala Ala Gly Lys .75
- Asp Ala Lys Ile The Trp Ile Pro Leu Ser His Met Pro Ala Ala 290 295 300
- Led Gln Asp Phe Leu Leu Lys Gln Lys Ala Glu Leu Ala Ash 305 310

Fro Lys Ala Val

- 4.3100 11
- < 111 2720
- <.::12 + DNA</pre>
- 4.1137 Homo sapines

## <400° 11

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- qaqototogg thoothicay toggapttop tganqaogoo agtgygogyg  $100\,$
- 400 of tiggs cogregorate bactgraphs at graded accept cogregor 1%0
- doogootoat ogggaottoa totoggtgab gotgagottt ggogagagot 200
- atgacaacag caagagttyg oggogyogot ogtyctggag gaaatggaag 250
- caactgtoga gattgcagog gaatatgatt otottootoo ttgcotttot  $300\,$
- gettitetgt ggaetestet tetacateaa ettggetgae eattggaa $\alpha g=350$
- contiggottt baggotagag guagagbaga agatgaggob Agaaattjii 400
- gggttaaaac cagcaaatcc accegtotta ccagetoote agaaggegga 450
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- adatobagog ggdaddadot dadotgdaga ttagaddddd aagddaagan 550
- rtgaagyatg goadccaooa ggaggecawa aaaaggeaag aagbeebtot 60%
- ayat nhiwak dodyaayyaq atodynaday garagtoato ayotdyayay éd

Haargatuat ogagoof þag ræggglæbrú agotlinftin aagaagagga $\mathbb{C}$ raagtuoosa seaageetee eetgocaeeg gedaggastae auggesõase 750 untgeatetg aactatiges agaagggegt dattgalgte tiestgratg 800. catggaaagg atacogbaag titgcatggg godatgacga gotgaagobt 850. ungtocaggt cottoagtga gtggtttggb bloggtotba babtgatbga 900. ngogotggad accatgtgga tottgggtot gaggaaagaa titgajjaag 900. maggaagtg ggtgtogaag aagttacact ttgaauagga ogtggaogto 1000 Bacotyttty agagoacgat cogeatooty gyggyptoc tyagtycota 105° acabotytot gyggadagod tottootyay gaaagotyay gatttfygaa 1194 atoggotaat gootgootti agaababbat opaagattoo ttabtoggat 1150. ytgaacatog gtaotggagt tyoodaboog coaegytyga botoogabag  $1700^\circ$ cactgtggod gaggtgacca goattcagot ggagttoogg gagctctooc 1/5/ gtotoacagg ggataagaag titoaggagg cagiggagaa ggigacacag 1800. capatocadg gootgtotgg gaagaaggat gggotggtyd obatgttoat 1.5%caatacccas aytiggestot tipacccaept gygoytatto acqotigygog 1400. rbagggodya bagotabhat gagtabbtgo tgaagbagtg gatobaggyo 1450. gggaagcagg agacacagot gotggaagac tacgtggaag ccatcgaggg 1500. tytoagaady cacotyotyo gydadtodga goddaytaag dtoacetttg 1950. tyggggaget typocapggo ogettbagtg bbaagatgga bbabbtggtg 1600. tyottootgo bagggabget ggetetggge gtotabbaeg geotgebege 1650. cagocacaty gagotygoco aggagotoat yyayaottyt taocagatya 1700acoggoagat ggagaegggg etgagteeeg agateytgea etteaacett 1750 tacccccago ogggeogtog ggaegtggag gteaagecag cagacaggea 1800. caacotgotg cygodayaga cogtggagag cotgttotac otgtacogog 1850 thanagggga chgbaaatad baggabtggg gotqggagat totgbagagb 1900. tinagoogat toacabiggt chootogggt ggotattott chatcaacaa 1950 tytocaggat coloagaago oogagootag ggacaagatg dagagottot 2000 tinninggggga qanghtuaad tatotigttot tigothitoto ngatigacida 2050. Parintarita grotarisas in esatanto aacasciees instaccitot 2100.

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1. 10 - 12

-...11 - 699

 $\cdot.21.^{\circ} \cdot \mathsf{PRT}$ 

11 Homo sapiens

10.20

-121 TEANSMEM

+2212 + 21-40 and 84-105

+22 + Transmembrane Domain (type II)

+4000 12

Met Ala Ala Cys Glu Gly Arg Arg Ser Gly Ala Leu Gly Ser Ser 1  $^{-5}$ 

Glt. Ser Asp Phe Leu Thr Pro Pro Val Gly Gly Ala Pro Trp Ala 20 25 30

Val Ala Thr Thr Val Val Met Tyr Fro Pro Pro Pro Pro Pro Pro 46

His Arg Asp Phe IIe Ser Val Thr Leu Ser Phe Gly Glu Ser Tyr 55  $\pm$  60

Asi Asn Ser Lys Ser Trp Arg Arg Arg Ser Cys Trp Arg Lys Trp 75

Lys Gln Leu Ser Arg Leu Gln Arg Asn Met Ile Leu Fhe Leu Leu 80 -85 90

Ala The Leu Lou Ebe Cys Gly Leu Leu Ebe Tyr Ile Asn Leu Ala

App His Try Tys Ala Leu Ala Fho Ard Leu Glu Glu Glu Glu Lys Met Arg Pro Glu Ile Ala Gly Le: Lys Fro Ala Asn Fro Fro Vol Leu Pro Ala Fro G.E. Lys Ala Asp Thr Asp Fro Glu Ash Leu Fro Glu Ile Ser Fer Gli. Lys Thr Gli. Arg Him Ile Gln Arg Gly Fro. Pro His Leu Glm II. Arg Pro Fro Ser Glm Asp Leu Lys Asp Gl; Thr Gln Glu Glu Ala Thr Lys Ard Gln Glu Ala Pro Val Asp Ero Arg Fro Glu Gly Amp Pro Gln Arg Thr Vil Ile Ser Trp Arg Gly Ala Val Ile Glu Fro Glu Gln Gly Thr Gin Leu Pro Ser Arg Arg Ala Glu Val Pro Thr Lys Pro Pro Leu Pro Pro Ala Arg Thr Gli Gly Thr Pro Val His Let Ash Tyr Arg Glr. Lys Gly Val Ile Ap .1 E, Val Phe Leu His Ala Trp Lys Gly Tyr Ard Lys Fhe Ala Trp 317 His Asp Glu Leu Lys Pro Val Ser Arg Ser Phe Ser Glu Trp Phe Gly Leu Gly Leu Thr Leu Ile Asp Ala Leu Asp Thr Met Trp 110 Leu Gly Leu Arg Lys Glu Phe Glu Glu Ala Arg Lys Trp Val Der 5 7 (1) Lys Lys Leu His Fhe Glu Lys Asp Val Asp Val Asr Leu Phe Glu Ser Thr Ile Arg Ile Leu Gly Gly Leu Leu Ser Ala Tyr His Leu Ser Gly Asp Ser Leu Phe Leu Arg Lys Ald Glu Asp Phe Gly Ash 5<u>5</u> () Arg Leu Met Fro Ala Phe Arg Thr Fro Ser Lys Ile Fro Tyr Cer Asp Val Ash The Gly Thr Gly Val Ala His Fro Fro Arg Trp Thr Ser Asp Ser Tor Val Ala Slu Val Thr Ser 114 'On Leu Glu Ehe

				395					4 30					455
Arg	Glu	Leu	Ser	Arg 410	I.eu	Thr	Gig	Asp	Lys 415	Lys	Fhe	Gln	Glu	Ala 42
Val	Glu	Lys	Val	Thr 425	Gln	His	lle	His	Gly 430	Leu	Ser	Gly	Lys	L3:
Asp	Gly	Leu	Val	Pro 440	Met	Phe	Ile	Asn	Thr 415	His	Ser	Gly	Leu	i h-45)
Thr	His	Leu	Gly	Val 455		Thr	Leu	Gly	Ala 160	Arg	Ala	Asp	Ser	Tyr 461
Tyr	Glu	Tyr	Leu	Le:1 470	Lys	Gln	Trp	I1e	31 n 475	Sly	Gly	Lys	Gln	(31) 48)
Thr	Gln	Leu	Leu	Glu 455	Asp	Туr	Val	Glu	Ai a 4 +0	Ile	Glu	Gly	Val	Ard 44°
Thr	His	Leu	Leu	Arg 500	His	Ser	Glu	Pro	Ser 505	Lys	Leu	Thr	Phe	Va I 51 (
Gly	Glu	Leu	Ala	H:B 511	Gly	Arg	Phe	Зег	A.a 5_0	Lys	Met	Asp	His	[
Val	Cys	Fhe	Leu	Pro Sali	Gly	Thr	Leu	Ala	Leng spess	Gly	Val	Tyr	Нis	515 540
Leu	Pro	Ala	Ser	H18 545	Met	Glu	Lēu	Ala	-31 n 55 )	Glu	Leu	Met	Glu	T1.1 505
Cys	Tyr	Gln	Met	Asn 560	Arg	Gln	Met	Glu	Thr 55	Gly	Leu	Ser	Pro	61u 91 ()
Ile	Val	His	Phe	A811 575	Leu	Tyr	Fro	Gln	Pro (80)	Gly	Arg	Arg	Asp	Val 985
Glu	Val	Lys	Pro	Ala 590	Asp	Arg	His	Asn	Le:11 C.45	Leu	Arg	Pro	Glu	Thr
Val	Glu	Ser	Leu	Ehe £()5	Tyr	Leu	Tyr	Arg	Val ElO	Thr	Gly	Asp	Arg	Lys 615
Tyr	Gln	Asp	Trp	625 620	Trp	Glu	Ile	Leu	Gin edg	Ser	Phe	Ser	Arg	Phe 630
Thr	Arq	Val	Pro	0er 635	Glÿ	Gly	Tyr	Ser	.'er 540	Ιlω	Asn	Asn	Val	(†. 1. 1.4°
Asp	Pro	Gln	Lys	Pro 650	Glu	Pro	Arg	Asp	1,755 655.	Met	Glu	Ser	Fhe	Pho EGC
Leu	Gly	Glu	Thir	Leu 665	Lys	Tyr	L€u	Phe	Leu €70	Leu	Fhe	Ser	Asp	Asp 1.75
Fr	Asn	Leu	Leu	Cer ean	l.eu	Asp	Ala	Tyr	Tal cas	Phe	ĀST.	Thr	G].1	Ala Kac

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His Fro Lau Ero Ile Trp Thr Fr. Ala
                   595
<21 13
<211 24
< ... 12 + DNA
-2313 - Artificial
. . (.2.)
\%,\, \mathbb{M} \times \mathbb{A}rtificial Sequence
..7.2.2 - 1-24
\sim 2.3 Synthetic construct.
 4.17)
 -ыргафандд gogtgattga cgtc 24
-.210 - 14
711 74
+ 212 + DNA
+.'ls - Artificial
\{(1,2)\}
Artificial Sequence
\leq 2.77^{\circ} \leq 1 \pm 2.4^{\circ}
+32\times Synthetic construct.
 400 14
indiffection topological good 24
+1.19 - 15
*. 11 + 44
*:11.: LIIA
cdl3 - Artificial
* ()
...1 - Artificial Sequence
1 – 4 4
Filt Synthetic construct.
-400 15
maancetyty topaggtest teagtgagtg gtttggeste ggts 44
-1.10 - 16
-11 15 4
· III. · DNA
RC13 Homo sapiens
<400% 16
ggogoogngt aggoooggga ggoogggoog geogggotge gagegootge 50
 constagged geogeotote ageacgatgt teceptogeg gaggaaageg 100
 gcgcagctgc cotgggagga oggcaggtcc gggttgctct coggcggcct 150
 chaloggaag tgttcogtot theadutgtt Egtgggetgd ctotcgctgg 200
 antiputere potanticing etgeauptea uprochotige ggaegiages 250
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inhoapeqeet ygbaqtgety ytgbortteb gagaabgett byyagqageth 400.
ctugtottog tgooccapat gogobgotto otgagcagga agaagatoog 450
incappacate taegtgetea accaggings coasticagg ticsaccygy 500
raiogotoat caacgtgggo ttootggaga goaqcaadag caoggastas 550
iftgebatge aegaegttga betgetobet etbaaegagg agetggasta 600
togotttoot gaggotgggo cottobargt ggostoorog gagotoraco 650.
intototacca otacaagaco tatgtoggog goatootyot gototonaag 700.
caycactacc ggotgtgcaa tgggatgtcc aaccgcttot ggggctgggg 750
cogogaggae gaegagttet acoggegeat taagggaget gggeteeage 800
ttttoogood otogggaato adaabtgggt abaagabatt togodaootg 850.
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egotgottgo catgoacagt gatbagagag aggotggggt gtgtoctgto 1300.
reggrandeds detigeettes typicaledet actotylaest settelaegty 1350.
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notactorga cotoottoac gigoccaqqo olgigggiag toqqqaaqqo 1450
tquacauqas aasetoteat sacesobaaa адаалаала адаалалала 1500
найнаанная навававава нава 1524
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<sup>&</sup>lt;.10. 17

<sup>2.1110 327</sup> 

<sup>&</sup>lt;.214 × FRT

<sup>1113</sup> Hord sariers

<sup>1 42 0</sup> 

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-.(15 sig_pertide
-222 l-42
-223 dignal peptide.
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r121 rds:_feature
r1212 19-15,65-71,247-253,285-291,303-310
<:::3 · N-myristoylation site.</pre>
(1, 1)
t. 11 misd feature
3.1.7 - 3\overline{1}
\mathbb{C}^{(3)} -cAMP- and cGMP-dependent protein kinase phosphorylation site.
1...10
 1 TRANSMEM
17.2 - 19-49
1823 Transmembrane domain (type II).
* 111
1221 misc feature
154-158
MARCH N-glycosylation site.
\{(1,0)\}
H. II misc_feature
1...6-233
All 3 Tyrosine kinuse phosphorylation site.
<400, 17
Me. Pho Pro Ser Ary Arg Lys Ala Ala Gln Leu Pro Trp Glu Asp
 Gly And Ser Gly Leu Leu Ser Gly Gly Leu Pro Arg Lys Cys Ser
 Val Pho His Leu Pho Val Ala Cys Leu Ser Leu Gly Pho Pho Ser
 Leu Leu Trp Leu Gln Leu Ser Cys Ser Gly Asp Val Ala Arg Ala
 Val Ard Gly Gln Gly Gln Glu Thr Ser Gly Pro Pro Arg Ala Cys
 Pro Pro Clu Pro Pro Pro Glu His Trp Glu Glu Asp Ala Ser Trp
Gly Pro His Arg Leu Ala Val Leu Val Pro Phe Arg Glu Arg Fle
Glu Glu Leu Leu Val Fhe Val Pro His Met Arg Arg Fhe Leu Ser
                  110
                                       115
Ard Lys Lys Ile Arg His His Ile Tyr Val Leu Ash Gln Val Asp
                  125
His Etc Ard the Ash Ard Ala Ala Leu Ilo Ash Val Gly Etc Leu
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				145					145					150
⊍1u	Jer	Ser	Asn	Ser ISS	Thr	Asp	Tyr	Ile	Ala 160	Met	His	Asp	Val	Asp 165
Leu	Leu	Fro	Leu	Asr. 170	Glu	Glu	Leu	Asp	Tyr 175	Gly	Fhe	Pro	Glu	Ala 180
£1;	Fro	Phe	His	Val 185	Ala	Ser	Fro	Glu	Leu 140	His	Fro	Leu	Tyr	His 195
Tyr	Lys	Thr	Туг	Val 200	Gly	Gly	Ile∙	Leu	Liqu JOS	Leu	Ser	Lys	Gln	His 210
Т/1	Arg	Leu	Суг	Asr.	Gly	Met	Ser	Asn	Ārģ	Phe	Trp	Glγ	Trp	Gly 725
Arg	Glu	Asp	Asp	Glu 230	Phe	Гуг	Arā	Arg	71e 235	Lys	Gly	Ala	Gly	Leu .140
-31n	Lou	Phe	Arq	Pro . 41	Ser	Gly	Ile	Thr	Thr	Gly	Туг	Lys	Thr	Phe . 55
Arg	His	Leu	His	Asp . 60	Pro	Ala	Trp	Arg	Lys	Arg	Asp	Gln	Lys	Arg .70
[le	Ala	Ala	Gln	Lys 175	Gln	Gla	Gln	Phe	Ly3	Val	Asp	Arg	Glu	Gly 189
617	L∵u	Asn	Thr	Val .190	Lys	Τγr	His	Val	Ala . 95	Ser	Arg	Thr	Ala	Leu 700
3er	V :a l	Gly	Gly	Ala 305	Pro	Суз	Thr	Val	Leu 510	Asn	Ile	Met	Leu	Asp 315
Сул	Аяр	Lys	Thr	Ala 320	Thr	Pro	Trp	Cys	Thr 325	Phe	Ser			
+210° +211 +211 +213	+ .73 + DNA		cial											
<pre> <pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre>														
<100. 18 dogaacgott ogaggagtoc tgg 23														
<10: <11 <12>	- 1:4 > DN#		cial											

1.27. .113 Artificial Sequence

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 užis Synthetia sunstruct
 4305 19
 graitquqqq aaqceacatg qtac 24
.210 - 20
.211 - 46
...12 DNA
-213 Artificial
J.20+
-. 11 · Artificial Sequence
1-46
5.23 - Synthetia construct.
(400 · (0)
Principago aggaagaaga tooggoacca batctaogtg otcaac 46
\sim 10 - 11
(7.11 - 4)4

∠. 1. - DNA

<..13 Homo sapiens</pre>
<400 + 31
 paralightige statebackt hooceaaged cetttaceta tigetigetiget 50
 asomotycty otgotyctyc tyctycttaa aggeteatge ftgyagtygg 100
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 44ttg Maet totttococc ttoctttotg tgtotoctgo otcatogged 200
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attiatudaa agatattaag goodigttoa ttaagaaatt gitooditoo 400
restatgitica atgittigiaa agattgitici gigilaaatai gicilitataa 450
 < 2.100 - 2.1
4.111. 73
F. I. PET
*.11% Homo sapiens
2. M. O.
<dilt> sig_peptide
1-\overline{15}
<!!!! Signal peptide.</pre>
1.
skil misc feature
2.5. 3-18
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Origin fact r and cytokines recept is family.

4.74 1.7

M t Leu Leu Leu Thr Leu Leu Leu Leu Leu Leu Leu Leu Lys Gly I 5 10

 $^{\circ}$  : C/s Leu Glu Trp Gly Leu Val Gly Ala Gln Lys Val Ser 3er -20

Ala Tur Asp Ala Pro Ile Arg Asp Trp Ala Phe Fhe Pro Pro Ser -35 -40 -45

The Leu Cys Leu Leu Pro His Arg Fro Ala Met Thr Cys Ser GIn -60

Ala Gir. Fre Arg Gly Glu Gly Glu Lys Val Gly Asp Gly 65

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ayfigdatggo itdatatati gatdaggaba tgbaagtgit gtggtatbag 1050.
ghtggyagaa tagttgaaac ogatgaatog caaggtattt ttgttgaaaa li00
gnacatgatt cacaactgot cottgattgo aagtgoosta abcatttota 115%
afattcaggo tggatotant gyaaattggy gotytcatgt ocagaccaaa 12)#
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qalaktrahan titat wotq qabtqutaru aarqinaaara factaftqt: 7300
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ii saa waantitain mahmisaaa jii shhat togoottoo 2350
 in intjutt itaagabaat aagangtith cataggabbo taaaagtato ..40 '
    in with agractices streetingen tagtggagaa gheaaccetg ..450
 : Promagty titaatraag caagetgtat atcaaaattt tiggeagaaa .500
    imaatat ytsatatato tittititaaa aaaaytatti cattyaagca 2550
 בוריים aagcatitti actgatitti aaaatiggig otitagatai 1.600.
 utidiitae aetgtattga agcaaataga ggaggeacaa etecageace 1650
 of estimate capatititi toacifaget tietytygge atgigtaatt [700]
 Hattitoty oggittitää totoacagta otttatttot giottytoso .750
tou it lutat cacaaajaat attocagtou tittuatggo tgcataataa 1800
cturt maac aggigtiagg tigttoliggit tagligtigage acticaataaa 2850
tattguatga atgaacgaaa aaaaaaaaaa aaa 2883
1107 24
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- <213 Homo sapiens
- . 202
- <...31\ sig\_peptide
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- <add>Signal peptide.
- <.!!!();
- TRANSMEM
- -1... 13-40
- <313: Transmembrane domain (type II).</pre>
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- Leu Leu Pro Leu Ser Leu Leu Ala Leu Leu Ala Leu Leu Gly Gly
- Gly Gly Gly Gly Ala Ala Ala Leu Pro Ala Gly Cys Lys His
- Asp Gly Arg Pro Arg Gly Ala Gly Arg Ala Ala Gly Ala Ala Glu
- Gly Lyc Val Val Cys Ser Ser Leu Glu Leu Ala Gln Val Leu Fro
- ir Asy Thr Leu Fro Ash Ard Thr Val Thr Leu He Leu Ser Ash

Not lie for Glu Leo Lys Ash. Bly Ser Fle Der Gly Leu Ser 1110 100 Glu Arg Leu Asp Leu Arg Ash Ash Leu Ile Ser Ser Ile : or Gly Ala Phe Trp Gly Leu Ser Ser Leu Lys Arg Leu Asp Let Thr Asn Asn Arg Ile Gly Cys Leu Awn Ala Asp Ile Fhe Arg 140 145 4% Lou Thr Ash Lou Val Arg Leu Ash Lou Ser Gly Ash Leu Phe Her Jer Ser Glin Gly Thr Fhe Asp Tyr Leu Ala Ser Leu Arq 1.79 1.26 1.80der deu Glu Phe Gln Thr Glu Tyr Leu Leu Cys Asp Cys Asn Ile Leu Trp Met His Arg Trp Val Lys Glu Lys Asn Ile Thr Val Arg Asp Thr Ard Cys Val Tyr Pro Lys Ser Leu Gln Ala Gln Pro Val Thr Gly Val Lys Glr Glu Leu Leu Thr Cys Asp Pro Pro Leu Glu Leu Fro Ser Phe Tyr Met Thr Pro Ser Hill Arg Gln Val Val Phe  $150\,$ Glu Gly Asp Ser Leu Pro Phe Gln Cys Met Ala Ser Tyr Ile Asp . 50 1455 Glm Asp Met Glm Val Leu Trp Tyr Glm Asp Gly Arg Ile Val Glu Thr Asp Glu Ser Gln Gly Ile Phe Val Glu Lys Asn Met Ile Hiz Asn Cys Ser Leu Ile Ala Ser Ala Leu Thr Ile Ser Asn Ile Gli.  $[\cdot\,])[t]$ Ala Gly Ser Thr Gly Asn Trp Gly Cys His Val Gln Thr Lys Aig  $\operatorname{Gi}_T^{\infty}\operatorname{Asn}$  Asn Thr Ard Thr Val Asp Ile Val Val Leu Glu Ser Ser Ala Gln Tyr Cys Fro Fro Glu Arg Val Val Asn Asn Lys Gly Arp ble Ars Trp Fro Arg Thr Leu Ala Gly Ile Thr Ala Tyr Leu Gln 365 Ty. The Are Ash The His Gly Nor Gly He Tyr Pro Gly Ash Fro

364 His Asy His Ard Dys Asia Trp Arg Arg Cys Asp Ard Oly Gly Fhe Trị Air Asp Asp Asp Tyr Ser Arg Cys Gln Tyr Ala Asn Asp Val 415 The Arg Val Leu Tyr Met The Ash Gln Met Fre Leu Ash Leu Thr 4 ₹0 Asso Ala Val Ala Thr Ala Ard Gin Leu Leu Ala Tyr Thr Val Glu 445 Ala Ala Asn Fhe Ser Asp Lys Met Asp Val Ile Phe Val Ala Giu Met lle Glu Lys Phe Gly Ary Phe Thr Lys Glu Glu Lys Ser Lys Glu Leu Gly Asp Val Met Val Asp Ile Ala Jer Asn Ile Met Leu Ala Asp Glu Arg Val Leu Trp Leu Ala Gin Arg Glu Ala Lys Ala Gys Ser Arg Ile Val Gln Cys Leu Gln Arg Ile Ala Thr Tyr Arg 515 5:0 Leu Ala Gly Gly Ala His Val Tyr Ger Thr Tyr Ser Fro Asn Ile 530 555 Ala Leu Glu Ala Tyr Val Ile Lys Ser Thr Gly Phe Thr Gly Met 545 Thr Cys Thr Val Phe Gln Lys Val Ala Ala Ser Asp Arg Thr Gly Leu Ser Asp Tyr Gly Arg Arg Asp Fro Glu Gly Asn Leu Asp Lys Gln Leu Ser Phe Lys Cys Asn Val Ser Asn Thr Phe Ser Ser Leu Ala Leu Lys Val Cys Tyr Ile Leu Gln Ser Phe Lys Thr Ile Tyr

Jor

E3:100-25

<sup>&</sup>lt;.11> 24

<sup>1112 -</sup> INA

<sup>\*</sup>dl\*\* Artificial

<sup>1221 2</sup> 

<sup>+121</sup> Artificial Sequence

<sup>122 - 1-24</sup> 

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-22 <- Synthetic - not root
+400 + 25
Maquaetese cautetgatt egge 24
< 105 36
311* 34
-1112 INA
1213 Artificial
.29
.221 Artificial Sequence
222 1-24
3.3 Synthetic construct.
 400 ...6
 наптучнаау yaayyotgto tooc 24
11 ...7
1.11 - 50
1 11 INA
5-13 Artificial
....! Artificial Sequence
All : Tynthetic construct.
4400 . 7
 Theragiaga alascatoso ggtacgggat accaggtgtg titatoctaa 50
1.10.3
· 111 / R3
1 1 1 NA
<i10 Homo sapiens</pre>
<4000.3
degity great greataggage regaaggrag regraggest ereggrager 50
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cticaagcag aaagagagaa qatgttattg gcaaaaggat ctcaaaaatc 250
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actigicētit iaaactiga: caaataaagg acagigggic atataagita 400
chastificag antouctiat atotgaataa aggagtgtgg goagacactt 450
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tato waniga italiyitat tacipapaad bactanogad ittyidagaa 500

insangustu gehantagus tursertusa tantrigatu antungdata 600 sigangaago paugaada tudacetusa naggaetija gysaygtdas 650 gtugagggad adacedotoot dategtogaa too 683

- 3105 29

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212 - FRT

13 Homo sapiens

..20

331 Jug\_peptide

1.12 1-21

:223 Signal peptide.

=400 29

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The Ala Ala The Val Ala Gly Val His Val Lys Gln Gln Trp Asp 20 25 30

Glm Glm Arg Leu Arg Asp Gly Val Ile Arg Asp Ile Glu Arg Glm 35 40 45

Fig. Arg Lys Lys Glu Asn Ile Arg Leu Leu Gly Glu Gln Ile Ile 50 60

Lor: Thr Glu Gln Leu Glu Ala Glu Arg Glu Lys Met Leu Leu Ala 65 70 75

bys Gly Ser Gln Lys Ser 80

-110 30

4.11: 2128

COLORA

<..1 tomo sapiens</pre>

<4004 30

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3 Tringgra itaagedoog accordynic retalgedoor geetggeact 2000
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.... Teger agagegatet taaaggaage aggggetgga tgenttteat 2100
.... ecantati etetgtijta tgaaaaag 2126
2108 31
.... 322

Ser Thr Cys Val Al. Fhe Ser Leu Val Al. Ser Val Gly Ala Trp  $\frac{50}{50}$ 

Thr Gly Ser Met Gly Asn Trp Sei Met The Thr Trp Cys Phe Cys  $\frac{1}{10}$ 

Pho Ser Val Thr Lou Ile Ile Leu Ile Val Glu Leu Cys Gly Lou  $8^{\circ}$ 

Gln Ala Arg Fhe Pro Leu Ser Trp Arg Asn Fhe Pro Ile Thr Phe  $\frac{37}{100}$   $\frac{100}{100}$ 

Ala Cys Tyr Ala Ala Leu Phe Cys Leu Se: Ala Ser Ile Ile Tyr 110 115 116

Pro Thr Thr Tyr Val Gln Phe Leu Ser His Gly Arg Ser Arg Amp 135 136 136

His Ala Ile Ala Ala Thr Phe Phe Ser Cys Ile Ala Cys Val Ala  $140\,$   $14!\,$   $150\,$ 

Tyr Ala Thr Glu Val Ala Trp Thr Arg Ala Arg Pro Gly Glu Ile 155  $16^{\prime}$ 

Thr Gly Tyr Met Ala Thr Val Fro Gly Leu Leu Lys Val Leu Glu 170 175 180

Thi Fre Val Ala Cyr lle lle Fhe Ala Ete lle Ser Asp Fro Asn 195

Leu Tyr Gln His Gln Fro Ala Leu Glu Trr Cys Val Ala Val Tyr

- An Ile dys Ehe Ile Ieo Als Als Ile Als Ile Ieo Ion Ann Ion UlE 225 - 225
- Hy Glu Cys Thr Asn Val Lea Fro Ile Fro The Fro Ser The Lea 240 240
- Cer Gly Leu Ala Leu Leu Ser Val Leu Leu Tyr Ala Thr Ala Leu 245 -250 -255
- Val Leu Trp Pro Leu Tyr Gln Phe Asp Glu Lys Tyr Gly Gly Gln 260 260 265
- Fr. Arg Arg Ser Arg Asp Val Ser Cys Ger Arg Ser His Ala Tyr 285 289
- Tyr Val Cys Ala Trp Asp Ard Ard Leu Ala Val Ala Ile Leu Thr 290 295
- Ala Hle Asn Leu Leu Ala Tyr Val Ala Asp Leu Val His Sor Ala 305 310 315
- His Lea Val Phe Val Lys Val 320
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- ~211 3680
- <212> DNA
- <400≥ 3.5
- gaacqtqcca ccatgercag chaattitig tattitiagt agaqacqqqq 50 titcaccatq tiggecagec togtotigaa ctogtgacci catgateege 100 teaccaege eteccaaagt getggatta caggeatqag ccactgacq 150 ciggecagec tatgeattit taagaaatta tietgtafta ggtgetgtge 200 taaacattgg geactacagt gaccaaaaca gactgaatte cecaagagec 250 aaagaccagt gagggagec aacaagaaaca aggaaatgca aaagagacca 300 titattactca ctatgactaa gggtcacaaa tigggytaegt tigatggagag 350 tigattigifa agagactaca gagggaggac agactaccaa gaggggggec 400 aqqaaagate etetgacqa qiggtattic ageccaaact ggaagaafqa 450 qaaaqagata gocagccate agaatagtee agaagagatg gagagcamta 500 cactcachae acttriggect qaqaaaatag catgggattig gaggaggect 500 qaqaaacac acttriggect qaqaaaatag catgggattig gaggagget 500 qaqaacaca acttotgecg acctgggeaq gaggcattia qagettgaga 600 aaaqqaaatag acatgagaa tagaaaqaac agggtagaaq cagagactti 600 magginaati icattaggte tratcaabag atatggaada qagagactti 600

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caaggtgaat gttggagaca cagtogogat gotgoocaag toooggogag 1300
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toacotgoty ecotggaats agoottitied toditaticag acctoagiga 1750.
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<211> 335

<21.> PRT

<21 >> Hemo sapiens

<4005 33

Met. Phe Leu Ala Thr Leu Ser Phe Leu Leu Pro Fhe Ala His Pro 1 5 10 15

Fhé Gly Thr Val Ser Cys Glu Tyr Met Lea Gly Ser Pro Lea Ser

Ser Leu Ala Gl<br/>n Val Asn Leu Ser Pro Phe Ser Ris Erc Lys Val<br/>  $\frac{35}{40}$ 

His Met Asp Pro Ash Tyr Cys His Pro Ser Thr Ser Leu His Leu -50

Cys Ser Leu Ala Trp Ser Phe Thr Arg Leu His Pro Pro Leu  $6^{\circ}$ 

Ser Pro Gly Ile Ser Gln Val Val Lys A.:p His Val Thr Lys Fro  $80^{\circ}$ 

Thr Ala Met Ala Glr. Gly Arg Val Ala His Leu Ile Glu Trp Lys  $0^4$  100

Gly Trp Ser Lys Pro Ser Asp Ser Pro Ala Ala Leu Glu Ser Ala 110 \$115\$

Phe Ser Ser Tyr Ser Asp Leu Ser Glu Gly Glu Gln Glu Ala Arg 125 130 130

Phe Ala Ala Gly Val Ala Glu Gln Phe Ala Ile Ala Glu Ala Lys 140 145 150

Leu Arg Ala Trp Ser Ser Val Asp Gly Glu Asp Ser Thr Asp Asp 15! 160 165

Ser Tyr Asp Glu Asp Phe Ala Gly Gly Met Asp Thr Asp Met Ala 170 175 180

Gly Gln Leu Pro Léu Gly Pro His Leu Gin Asp Leu Phe Thr Gly

His Arg Phe Ser Arg Fro Val Arg Gln Gly Ser Val Glu Pro Glu 200-205

Lou Cys Ser Leu Glu Ask Gly Leu Leu Gly Ser Fro Ala Arg Leu 240

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Ala Ser Slm Leu Leu Gly Asp Sla Fon Leu Lon Ala Lys Leu Fro
 Pro Ser Arg Glu Ber Ala Phe Arg Ser Leu Gly Fro Leu Glu Ala
                                        265
 Gln Asp Ser Leu Tyr Ash Ser Pro Leu Thr Glu Ser Cys Leu Ser
                                        280
 Pro Ala Glu Glu Glu Fro Ala Pro Cys Lys Asp Cys Gln Fro Leu
  Tys Pro Pro Leu Thr Gly Ser Trp Glu Arg Gln Arg Gln Ala Ser
 Asp Leu Ala Ser Jer Gly Val Val Ser Leu Asp Glu Asp Glu Ala
 Gla Pro Glu Glu Gln
<210> 34
*::11 + 15

*::1. + INA

*::13 + Artificial
 220 -
7.21 - Artificial Sequence
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-14 ()() § 4.
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FIRM Synthetic construct.
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ULIZ - DNA
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- 210% 37
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<215 - Artificial
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-.:22 - 1-23
 3.3 Synthetic construct.
== 10 37
 Higharmoot Hactatooag gag 23
 21.0 \pm 33
.211 - 59
21.1 DNA
213 Artificial
42.00
Cull - Artificial sequence
1.1.1.1 - 1-39
CD23 - Dynthetic construct.
1100 - 13
-ggagatoget gegetggeea ggteeteest geatggtat 39
< 10 < 50
7311 72
+212 + bMA
+213 + Artificial
s = \frac{1}{2} \left( 1 + \frac{1}{2} \right)
-7.31 - Artificial sequence
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- 23 - Cynthetic construct.
-14(00) 304
intoctocasa gogagootot tg 22
- 210 40
\sim 11 \times 7084
<.11 + DMA < 1130 Homo sapiens
<400: 40
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<210 + 41

S211 + 334

 $\leq 3.12 + \mathtt{PRT}$ 

<213 - Homo sapiens

<400 + 41

Met Leu Ala Leu Ala Lys Ile Leu Leu I.e Ser Thr Leu Phe Tyr 1 5 10 15

Ser Leu Leu Ser Gly Ser His Gly Lys G.a Asn Gln Asp Ile Aan  $20^{\circ}$  .  $^{\circ}$  15  $^{\circ}$ 

Thr Thr Gln Asn Ile Ala Glu Val Phe Lys Thr Met Glu Asn Lys 35 45

Pro Ile Ser Leu Glu Ser Glu Ala Asn Leu Asn Ser Asp Lys Glu 50 -50

Asr Ile Thr Thr Ser Asn Leu Lys Ala Sor His Ser Pro Pro Lou 65

Ser Ser Ala Glu His Ser Leu Gly Ser Leu Lys Pro Thr Ser Thr  $95 \,$   $100 \,$ 

lle Ser Thr Ser Pro Pro Leu Ile His Ser Phe Val Ser Lys Val 110 115 130

Fro Trp Asn Ala Pro Ile Ala Asp Glu Asp Leu Leu Pro Ile Sor 125 180 180

Ala His Pro Asn Ala Thr Pro Ala Leu Ser Ser Glu Asn Fbe Thr 140 145

Trp Ser Leu Val Asn Asp Thr Val Lys Thr Fro Asp Asn Ser Ser 155 165

Ile Thr Val Ser Ile Leu Ser Ser Glu Fro Thr Ser Pro Ser Val 170 175

The Fr Lew Ile Val Glu Pro Ser Gly Trp Lew The The Ash Jer 185 190 190

- Tyr Tyr Asn Pro Thr Leu Asn Asp Ser Ala Met Pro Glu Ser Glu
- Glu Asn Ala Arg Asp Gly Ile Pro Met Asp Asp Ile Pro Pro Leu 820 -325 -330

Arg Thr Ser Val

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<sup>1.10 4.1</sup> 

<sup>1.11 - 1594</sup> 

<sup>4.12</sup> DNA

<sup>~.13 ·</sup> Homo sapiens

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rasontanta tetjakoko otkasataetti htattyttät kreiteesaasa 600
ai atggtag agetetttgd valaketggeg agtggeagat atetgeetea 650
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tgatasatga tggaagatta gawacttooc caacgaattt attgttgaga 850
schagatotg toaagagtaa qajgoaacaq ataqagtqto ottggtasta 900
agaautoaga gatttabaat atmabtttaa mattaaggtt tatoggatab 950
tcaagatatt tacteatgea tittaetetat tgettatget titaaaaaaag 1000.
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tytytaggtg ctgaatgetg taaggagttt aggttgtatg aattetacaa 1550
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<sup>&</sup>lt;210 - 45

<sup>&</sup>lt;211 - 263

<sup>17712 /</sup> PET

<sup>&</sup>lt;213> Homo sapiens

<sup>&</sup>lt;400> 43

Met Val Lys Ile Ala Phe Asn Thr Fro Thr Ala Val Gln Lys Glu
1 5 10 15

Glu Ala Arg Gln Asp Val Glu Ala Leu Leu Ser Arg Thr Val Arg 20 25 30

Thr Gln lle Leu Thr Gly Lys Glu Leu Arg Val Ala Thr Gln Glu 35 40

Lyc Glu Gly Ser Ser Gly Ard Cys Met Leu Thr Lon Leu Gly Lou

Cer the Tie Let Ala Gly Leu lie Val Gly Gly Ala Cys Ile Tyr 75

Lys Tyr Fhe Met Fro Lys Ser Thr Tie Tyr Ard Gly Glu Met Cys 80 35

Fhe Fhe Asp Ser Glu Asp Pro Ala Asn Ser Leu Arg Gly Glu  $95\,$   $100\,$   $105\,$ 

Pro Asn Phe Leu Pro Val Thr Glu Glu Ala Asp Ile Arg Glu Asp 110 115 120

Asp Asn Ile Ala Ile Ile Asp Val Pro Val Pro Ser Fhe Ser Asp 135 130 136

Ser Asp Pro Ala Ala Ile Ile His Asp The Glu Lys Gly Met Thr  $140\,$ 

Ala Tyr Leu Asp Leu Leu Leu Gly Ash Cys Tyr Leu Met Pro Leu 165 \$160\$

Asn Thr Ser Ile Val Met Pro Pro Lys Asn Leu Val Glu Leu Phe  $170\,$   $175\,$   $180\,$ 

Gly Lys Leu Ala Ser Gly Arg Tyr Leu Fro Gln Thr Tyr Val Val 185 190

Ar; Glu Asp Leu Val Ala Val Glu Glu He Arg Asp Val Ser Ash 300 .05

Arj Leu Arg Arg Arg Asp Leu Leu Gly Phe Asn Lys Arg Ala 230 235 240

The Asp Lys Cys Trp Lys Ile Arg His The Pro Asn Glu Phe Ile \$345 \$250

Val Glu Thr Lys Ile Cys Gln Glu

<...10> 44

<.:11 - 24

< 11.1 DNA

Artificial

. . . . . () =

\*121 Artificial sequence

1-24

<223 Synthetic construct.

400: 44

gaaagadang adalaghadd thgc 24

+ 210 45

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.. 21
        HG
       Artificial
 c... Artificial sequence
        1-20
· / Synthetic construct.
<.40() > 45
 ::::actgct atctgatgcc 20
     - 46
211 26
-211 DNA
· = l · · Artificial
*220 ·
< 'l-Artificial sequence</pre>
 1-26
7023 - Synthetic construct.
(411) - 46
 - inatotoc tottgcagto tgcage 26
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#.11 .78
7.12 DNA
7.13 Artificial
1. 201
1...1. Artificial sequence
1...1 1-28
1... Synthetic construct.
24 one 47.
 :: "rtrgaac cacataagtt tgaggcag 28
11111 48
11. ...
-. 1. LNA
FULL Artificial
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4.51^{\circ} Artificial sequence
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F. 25 - Synthetic construct.
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d.103 49
<1.11 · 1969</pre>
r.12 - ENĀ
| 213 - Hrmc sāpiens
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## <:00> E0

Met	Val	Ser	Ala	Ala	Ala	Pro	ser	Leu	Loca	Ile	Leu	Leu	Leu	Leu
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Leu Gly Ser Val Pro Ala Thr Asp A:a Arg Ser Val Pro Leu 
$$30$$
  $39$ 

Lys Ala Thr Phe Lei Glu Asp Val Ala Gly Ser Gly Glu Ala Glu 
$$4^{\circ}$$

Ala Leu Ser Pro Thr Ser Met Gly Pro Glr Pro Thr Thr Leu Gly 
$$75$$

Fhe Arg Gln Tyr Val Met Leu Ile Ala Val Val Gly Ser Leu Ala 
$$\frac{100}{100}$$

Tys Tyr Val Asp Gln Ser Asp Arg Ala Gly Gly Fro Arg Ala The 
$$14^{\circ}$$
  $14^{\circ}$   $150$ 

<sup>&</sup>lt;210: 50

<sup>&</sup>lt;211> 283

file: FRT

<sup>&</sup>lt;213> Homo sapiens

- ેલાં App (A)) Cor Ard the Len Gle Ala Asp The Len Ala Ala Chr 170 160
- The Aut. Leu Lys Ser Fro Thr Arg Ala Ala Leu Gly Gly Gly Asp 185 190 190
- %.. Ala Arg Met Val Glu Gly Arg Gly Ala Glu Glu Glu Glu Lyz -200
- Gly Sor Gln Gla Gly Asp Gln Glu Val Glr. Gly His Gly Val Pro
- Va. Glu Thr Fro Glu Ala Gl<br/>n Glu Glu Pro Dys Ser Gly Val beu  $230^\circ$  <br/>  $235^\circ$   $240^\circ$
- Glu Gly Ala Val Val Ala Gly Glu Gly Glu Gly Glu Leu Glu Gly .250 -250
- Cer Leu Leu Ala Glm Glu Ala Glm Gly Pro Val Gly Pro Pro 260 265 269
- Glu Ser Pro Cys Ala Cys Ser Ser Val His Pro Ser Val 275 - 280
- <210> 51
- + 211> 1734
- ·:.12> DNA
- <213 Hemo sapiens
- + 400> 51
- quadauniet agaagaaga tiggaagaa aggagagaagat tecaggatt 450 auagaaniet agaagagaa tiggaagaa aggagagaa aggagagaa aggagagaaga aggagagaagt tecaggagaa 200 catagaataa agaagagaa agaactgga agaataagt tecaggagaa 200 catagaataa agaactgga agaataattga gaagacatta 300 agaacatagaa agaagagaa agaactggaa aggagagaa aggacattaga 350 caaagaaga tiggaagaga agaactggaa aggacattaga 350 caaagaanaa agaactggaa caaatattga gaagacattga 350 caaagaanaa agaactggaa tiggagaagaa agaactgga tocaggagaa aggacattga 350 aaaagaanaa atgatttaga caaaagggaa aggagaagaa tocaggatt 450 agaaaanaa atgattaga caaaagggaa aggagaagaa agaactgga 500 agaaaanaa tigatgaagaa tiggaagaaa aggagagaaga tocaggatt 500 agaaaanaa tigatgaagaa tiggaagaaa aggagagaga 500 aaaaanaa tigatgaagaa aggagagaga aggagagaaga tagaaaaga 550 aaaaanaana tigatgaagaa aggacatgga aggagagaac tggacaaagt 600 agaaanaanaa aaaantaatga aggacatgga atotttggat otnaaggtga 650

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  $40$   $40$ 

<sup>&</sup>lt;210> 52

<sup>&</sup>lt;.11 - 440

 $<sup>4.112 + \</sup>mathtt{PRT}$ 

<sup>&</sup>lt;!!13> Homo sapiens

<sup>&</sup>lt; 400 - 18.4

Met Ly: The Gln Gly Fro Leu Ala Cys Leu Leu Leu Ala Leu Cys 1 5 10 15

Leu Gly Ser Gly Glu Ala Gly Fro Leu Gln Ser Gly Glu Glu Ser 25 30

Ala bet Cer Sit Siy Val Siy Lys Ala Ile Siy Lys Siu Ala Siy

My Ala Ala Gry Ser Lys Wal Fer Glu Ala Lon Gly Glu Gly Thr Arg Glu Ala Val Gly Thr Gly Val Ard Gln Val Prc Gly Phe Gly 90 Ala Ala Asp Ala Leu Gly Ash Arg Val Gly Glu Ala Ala His Ala Teu Oly Asn Thr Gly His Glu Ile Gly Arg Gln Ala Glu Asp Val lle Arg His Gly Ala Asp Ala Val Arg Gly Ser Trp Gln Gly Val Pro Gly His Ser Gly Ala Trp Glu Thr . For Gly Gly His Gly Ile The Gly Ser Gln Gly Gly Leu Gly Gly G.n Gly Gln Gly Asn Pro Gly Gly Leu Gly Tar Pro Trp Val His 317 Tyr Pro Gly Asn Ser Ala Gly Ser Phe Gly Met Ash Pro Gln Gly Ala Pro Trp Gly Gln 135 Gly Gly Ash Gly Gly Pro Pro Ash Phe Gly Thr Ash Thr Gln Gly Ala Val Ala Gln Pro Gly Tyr Gly Ser Val Arg Ala Ser Asn Gln 315 - 530 Ash Glu Gly Cys Thr Ash Pro Pro Pro Ger Gly Ser Gly Gly Gly Ser Ser Asn Ber Gly Gly Gly Ser Gly Ser Gln Ser Gly Ber Jer Gly Ser Gly Ser Asm Gly Asp Asm Asm Asm Gly Ser Ser Ser Gly Gly Ser Ser Ser Gry Ser Ser Ser Gly Ger Ser Ser Gly Gly Ger For Gly 31; For New Gly Gly Fer For Gly Ash Ser Gly Gly Fer Arg Gly Asp Ser Gly Ser Glu Ser Ser Trp Gly Ser Ser Thr Gly 3:) E, Cer Cer Ser Gly Ann His Gly Gly Cer Gly Gly Gly Ash Gly Hi. 3.0  $^{\circ}$ Sly Cys Gra Lys Fr. Nly Ash Glu Ala Ard Gly Cer Sly

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Note that the fer Lys Glu Gly Aen Arg Leu Leu Gly Gly fer 
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$$-415$$

Lys Lou Gly Phe Ile Ash Trp Asp Ala Ile Ash Lys Asp Gln Arg 
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<sup>210 53</sup> 

<sup>&</sup>lt;!!11> 3590

<sup>&</sup>lt;212> DNA

<sup>&</sup>lt; 135 Homo sapiens</pre>

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<sup>// 11</sup> 

<sup>\*211 + 244</sup> 

<sup>·.1. \*</sup> FRT

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fle Leu Gly Asn Lys Thr Leu Pro Ser Arg Cys His Glm Cys Val
The Val Ser Ser Ser His Leu Leu Gly Thr Lys Leu Gly Fro
d'n lle Glu Arg Ala Glu Cys Thr lle Arg Met Asn Asp Ala Fro
The Thr Gly Tyr Ser Ala Asp Val Gly Ash Lys Thr Thr Tyr Arg
                110
Val Val Ala His Ser Ser Val Phe Arg Val Leu Arg Arg Fro Glo
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                                     130
Glu The Val Asn Arg Thr Pro Glu Thr Val Fhe Ile Phe Trp Gly
                140
                                    145
Pro Fro Ser Lys Met Gln Lys Pro Gln Gly Ser Leu Val Arg Val
Ile Gln Arq Ala Gly Leu Val Fhe Fro Amn Met Glu Ala Tyr Ala
Val Sor Pro Gly Ard Met Ard Gln Fhe Asp Asp Leu Fhe Ard (17
Glu Thr Gly Lys Asp Arg Glu Lys Ser His Ser Trp Leu Ser Thr
Gly Trp Phe Thr Met Val Ile Ala Val Glu Leu Cys Asp His Val
                . 15
His Val Tyr Gly M++ Val Pro Pro Asn Tyr Cys Ser Gln Arg Pro
Arg Leu Gln Arg Met Pro Tyr His Tyr Tyr Glu Pro Lys Gly Pro
                . 45
Asp Glu Cys Val The Tyr Ile Gln Asn Glu His Ser Arg Lys Gly
Asn His His Arg the Ile Thr Glu Lys Arg Val Fhe Ser Ser Irp
Ala Gln Leu Tyr Gly lie Thr Phe Ser His Fro Ser Trp Thr
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<sup>&</sup>lt; k11 + 4277</pre>

<sup>&</sup>lt;212 + FNA

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- Val Thr Leu Ala Cyr Leu Leu Leu Ala Thr Ala Gly Cys Phe Ala 20
- Asp Leu Asn Glu Val Pro Gln Val Thr Val Gln Pro Ala Ser Thr
- Val Gln Lys Pro 31,7 Gly Thr Val He Lei Gly Cys Val Val Glu
- Fro Pro Arg Met Ash Val Thr Trp Arg Leu Ash Gly Lys Glu Leu 6%
- Asn Gly Ser Asp Asp Ala Leu Gly Val Leu Ile Thr His Gly Thr  $\frac{1}{3}$  G
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- Thr Val Thr Leu Ala Asn Leu Gln Asp Pho Lys Leu Asp Val Gln 1.05
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- His Leu Pro Glu Ser His Pro Lys Ala Gln Val Arg Tyr Ser Val
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- Pro Ser Gly Asn Lou Gln Ile Val Asn Ali Ser Gln Glu Asp Glu 185
- Gly Met Tyr Lys Cys Ala Ala Tyr Asn Pro Val Thr Gln Glu Val 200 .  $20^{\circ}$
- Lys Thr Ser Gly Ser Ser Asp Ard Leu Ard Val Arg Arg Ser Thr ...15  $\frac{25}{2}$
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- Ile Val Thr Lys Gly Gin Ser Leu Ile Leu Glu Cys Val Ala Ser 155
- Gly Ile Fro Fro Fro Arg Val Thr Trp Ala Lys Asp Gly For Ser

Val Int. Bly Tyr Ash Bys Thr Ary Phe Leu Leu Ser Ash Ben Len ile Asp Thr Thr Ger Glu Glu Asp Ser Gly Thr Tyr Arg Cys Met Ala Asp Ash Gly Val Gly Gln Fro Gly Ala Ala Val Ile Leu Tyr Asn Val Gln Val Phe Glu Pro Pro Glu Val Thr Met Glu Leu Ser 3.0 Gla Leu Tal Ile F: Trp Gly Gla Ser Ala Lys Leu Thr Cys Siu Val Ard Gly Ash Fro Pro Pro Ser Val Leu Trp Leu Arg Ash Ala Val Pro Leu Ile Sei Ser Glm Arg Leu Ari Leu Ser Arg Ala 3.773 Leu Arg Val Leu Ser Met Gly Pro Glu Asp Glu Gly Val Tyr Gln Cys Met Ala Glu Asn Glu Val Gly Ser Ala His Ala Val Val Gin Leu Arg Thr Ser Arg Pro Ser Ile Thr Pro Arg Leu Trp Gln App Ala Glu Leu Ala Thr Gly Thr Pro Pro Val Ser Pro Ser Lys Lei Gly Asn Pro Glu Gin Met Leu Arg Gly Glr. Pro Ala Leu Pro Arg Pro Pro Thr Ser Val Gly Pro Ala Ser Fro Lys Cys Pro Gly Glu Lys Gly Gin Gly Ala Pro Ala Glu Ala Pro Ile Ile Leu Ser Ser Pro Arg Thr Ser Lys Thr Asp Ser Tyr Glu Leu Val Trp Arg Free Ard His Glu Gly Ser Gly Arg Ala Pro Ile Leu Tyr Tyr Val Val Lys His Arg Lys Gln Val Thr Ash Ser Ser Asp Asp Trp Thr Ile Ser Gly Ile Pro Ala Asn Gln His Arg Leu Thr Leu Thr Arg Leu Asp Fr. Gly Cer Leu Tyr Glu Val Glu Met Ala Ala Tyr Ash Cyr E E, () Act Gly Glu Gly Gin Thr Ala Met Val Thr The Arg Thr Gly Arg

AL: I: Lys Pro Glu Ile Met Ala Ser Lys Glu Gln Gln Ile Gln Ang Asp Asp Pro Gly Ala Ser Pro Gln Ser Ser Ser Gln Fro Asp · : Gly Ard Leu Ser Pro Pro Glu Ala Pro Asp Arg Fro Thr Ile at Thr Ala Ser Glu Thr Ser Val Tyr Val Thr Trp Ile Pro Arg Gly Ash Gly Gly Phe Pro Ile Gln Ser Phe Arg Val Glu Tyr Lys Lys Lou Lys Lys Val Gly Asp Trp Ile Leu Ala Thr Ser Ala Ile Fro Fro Ser Arg Leu Ser Val Glu Ile Thr Gly Leu Glu Lys Gly Thr Ser Tyr Lys Phe Arg Val Arg Ala Leu Asn Met Leu Gly Glu Ser Glu Pro Ser Ala Pro Ser Arg Pro Tyr Val Val Ser Gly Tyr 645 Ser Gly Ard Val Tyr Glu Arg Pro Val A:a Gly Pro Tyr Ile Th: 710 715 Phe Thr Asp Ala Val Asm Glu Thr Thr I've Met Leu Lys Trp Met 7.15 Tyr Ile Pro Ala Ser Asn Asr. Asn Thr Pro Ile His Gly Fhe Tyr 740 Ile Tyr Tyr Arg Pro Thr Asp Ser Asp Ash Asp Ser Asp Tyr Lys Lys Asp Met Val Glu Gly Asp Lys Tyr Trp His Ser Ile Ser His Leu Gln Pro Glu Thr Ser Tyr Asp Ile Lys Met Gln Cys Fhe Asn Glu Gly Gly Glu Ser Glu The Fer Asn Val Met Ile Cys Glu Thr 8110 805 Lys Ala Arg Lys Sor Ser Gly Gln Fro Gly Arg Leu Fro Fro Fro The Leu Ala Fro Fio Gln Fro Fro Leu Pro Glu Thr Ile Glu Ara Val Sly ThriGly Ala Met Val Ala Arg Ser Ser App Leu Fr

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TWO lets lie Val 'Bly Val Val Lets Gly Ser Ile Val Lets lie Ile 960 670
Ta' Thr The Ile Pro The Cys Leu Trp Arg Ala Trp Ser Lys Glm
TWO His Thr Thr App Leu Gly Fhe Pro Ard Ser Ala Leu Fro Pro
Wer Cys Pro Tyr Thr Met Val Pro Leu Gly Gly Leu Pro Gly His
Ala Ser Gly Gln Fro Tyr Leu Ser Gly He Ser Gly Arg Ala
Ty: Ala Ash Sly Ile His Met Ash Arg Bly Cys Pro Ser Ala Ala
Val Gly Tyr Pro Gly Met Lys Pro Gln Gln His Cys Pro Gly Gla
Leu Gln Gln Gln Ser Asp Thr Ser Ser Leu Leu Arg Sln Thr His
                46,5
Lou Gly Asn Gly Tyr Asp Pro Gln Ger Has Gln Ile Thr Arg Gly
Pro Lys Ser Ser Pro Asp Glu Gly Ser Phe Leu Tyr Thr Leu Pro
Asp Asp Ser Thr His Gln Leu Leu Gln Pro His His Asp Cys Cyc
                                  -1015
Gln Arg Gln Glu Gln Pro Ala Ala Val Gly Gln Ser Gly Val Arg
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                                  1036
Arg Ala Pro Asp Cer Pro Val Leu Glu Ala Val Trp Asp Pro Pro
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Fhe His Ser Gly Fro Cys Cys Leu Gly Leu Val Pro Val Glu
              1 (:::-=
                                1040
Glu Val Asp Ser Fro Asp Ser Cys Gln Val Ser Gly Gly Asp Trp
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Tys Fro Gln His Fro Val Gly Ala Tyr Val Gly Gln Glu Pro Gly
                                  1000
Met Gin Leu Ser Pro Gly Pro Leu Val Arq Val Ser Phe Glu Thr
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<sup>1102 59</sup> 

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<sup>+212+ 7</sup>NA +21+ Artiinmal

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Cl3 - Artificial
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1. 10 61
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1...1.1 DNA
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1-42
cynthetic construct.
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<sup>1. 11 . 6 .</sup> 

<sup>311 + 48</sup> T

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Met Glm Fro Thr Gly Arq Glu Gly Ser Arg Ala Leu Ser Arg Arg 1 10 15

Fig. Frc. Val. Thr. Arg Ala Glu Thr. Thr. Pro Gly Ala Pro Arg Ala 35.

Lou Ser Thr Leu Giy Ser Pro Ser Lou Phe Thr Thr Pro Gly Val 50

Fr. Car Ala Leu Thr Thr Fro Gly Leu Inc Thr Pro Gly Thr Pro  $6^{\circ}$ 

bys Thr Leu Asp Lou Arg Gly Arg Ala Gin Ala Leu Met Arg Sor 85

The Fre Leu Val Asp Gly His Asn Asp Leu Pro Gln Val Leu Arg  $\frac{100}{100}$ 

Glr. Ard Tyr Lys Ash Val Leu Gln Asp 741 Ash Leu Arg Ash Phe110 -115 -1.0

Cer His Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu V+l 105 -130 -15

Gly Ala Gln Phe Trp Ser Ala Ser Val Ser Cys Gln Ser Gln Asp140 145 150

Gln Thr Ala Val Arg Leu Ala Leu Gau Gln Ile Asp Leu Ile His 155 160 160

Arg Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala  $170 \,$   $175 \,$ 

Glu Gly Leu Asn Ger Ser Gln Lys Leu Ala Cys Leu Ile Gly Val 185

Xaa Gly Gly His Ser Leu Asp Ser Ser Leu Ser Val Leu Arg Ser 200 205

Ser Thr Fre Trp Ala Glu Ser Ser Thr Lys Phe Arg His His Met

Tyr Th: Ash Val Per Gly Lou Thr PAr the Gly Glu Lys Val Val .45 \$250

Cl. No. Let Arm Ard Let Gly Met Mot Ile Asp Not fer Tyr Ala

, £ 5 ... : AB; The Lew Ile Ard Ard Val Lew Glu Val Ser Glm Ala Pro . a. Ile the Ser His Ser Ala Ala Ard Ala Val Cys Asp Asn Leu 200 Asn Val Fro Asp Asp Ile Leu Gln Leu Leu Lys Asn Gly Gly Fig. Val Met Val Thr Leu Ser Met Gly Val Leu Gln Cys Asn Leu 320 ion Ala Ash Val Ser Thr Val Ala Asp His The Asp His Ile Arg 340 Ala Val Ile Gly Ser Glu Phe Ile Gly Ile Gly Gly Asn Tyr Asp Oly Tor Gly Arg the Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr Fro Val Leu Ile Giu Glu Leu Leu Ser Arg Xaa Trp Ser Glu Glu Glu Leu Gln Gly Var Leu Arg Gly Asn Leu Leu Arg Val Phe Arg elh. Val Glu Lys Val Arg Glu Glu Ser Arg Ala Gln Ser Pro Val 415 Glu Ala Glu Phe Fro Tyr Gly Gln Leu Ser Thr Ser Cys His Ser 425 4.30His Lew Val Fro Gln Asn Gly His Gln Ala Thr His Lew Glw Val 445 Thr Lys Gln Pro Thr Asn Arg Val Pro Trp Arg Ser Ser Asn Ala

Ser Pro Tyr Leu Val Pro Gly Leu Val Ala Ala Ala Thr Ile Pro

Thr Fhe Thr Gln Trp Leu Cys

470

€2100 €4

12112 25

cz12 - DNA

F21 <- Art:ficial

. 121 .

+221 - Artificial sequence

+ 222 + 1-24

\*\*\* \*\* Synthetic construct.

460

475

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 .10 - 75
 . 1. 1325
 213 - Artificial
 1208
 721 - Artificial sequence
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 _____ Synthetic construct.
 100 65
 nicacacaca getetgicad etgag 25
 230 66
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212 PNA
213 Artificial
.1.0
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13.3 Synthetic construct.
- 400 66
reaagtteag acaceaeatg tacaceaacg teageggatt gaeaage 47
-.110 - 67
-1.01 \cdot 1564
-1.12 - INA
<233 Momo sapiens
<400> 67
typiaggeto tytoccacas typiacoegag ageaggaget gaaageetet 50
 ancaccèaca gatocotota tgactgoaat gtgaggtgto eggetttgst 100
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  ាក់ លេងរា ឯកការជាមុខ Awarabadis stayadidig (ប្រធានជាអាច) 6(0)
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<211: 193

<213> PRT

<400> 68

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Fro Eri Ala Cu Ala Ash Lys Ser Cor Glu Ash Ile Ard Cys Lys 20 25 30

Cys lle Cys Fro Ert Tyr Arg Asn lle Cer Gly His lle Tyr Asn 40 46

Un Arm Va. For Glr. Lys Asp Cys Ash Cys Lob His Val Val Glu

- Er Mer Er Val Fr. Gly Plo Arr Val Glo Ala Tyr dyr Den Leu
- Tys Glu Tys Arg Tyr Glu Glu Glu Ari Ser Thr Thr Thr Ile Lys Val 65 90
- ile Ile Val Ile Tyr Leu Ser Val Val Gly Ala Leu Leu Tyr  $-95 \,$   $-100 \,$   $-105 \,$
- Met Ala Fhe Lou Met Leu Val Asp Pro Leu Ile Ard Lys Pro Asp 110 115 120
- Ala Tyr Thr Glu Gln Leu His Asn Glu Glu Glu Asn Glu Asp Ala 12' 130 135
- Arg Ser Met Ala Ala Ala Ala Ala Ser Leu Gly Gly Pro Arg Ala 140 145 150
- Asn Thr Val Leu Glu Ard Val Glu Gly Ala Gln Gln Ard Trp Lys 155 160 165
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Met Leu Ser

<2105 69

< 0.11> 3170

-212> DNA

<213> Homo sapiens

## <400> 69

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1210 - 70

<211> 259

<212> FRT

5313- Homo sapieus

-406 - 70

Met Ala Ala Leu Met Arg Ser Lys Ast Cer Ser Cys Cys Leu Leu 1 5 16 15

Leu Iou Ala Ala Val Lou Mot Val Glu Ser Ser Glu 116 Gly Ser 21 25 30

O'r Ard Ala Tyr Imu Art. Chr. 11e Lyr Jer Jer Jer dy dly dig 45

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ion Ala the Gly Gly Ser Lys Lys Gly Lys Am. Let Gly Gln Ala -65
Tyr Fro Cys Ser Ser Asp Lys Glu Cys Glu Val Gly Arg Tyr Cys
His Ser Pro His Gln Gly Ser Ser Ala Gys Met Val Gys Arg Arg
bys Lys Lys Arg Lys His Arg Asp Gly Met Cys Cys Fro Ser Thr
Ara Cys Ash Ash Gly lle Cys lle Pro Val Thr Glu Cer lle Leu
Thr Pro His Ile Pro Ala Leu Asp Gly Thr Arg His Arg Asp Arg
Asn His Gly His Tyr Ser Asn His Asp Leu Gly Trp Gln Asn Leu
Sly Arg Pro His Thr Lys Met Ser His I.e Lys Gly His Glu Gly
Asp Pro Cys Leu Arg Ser Ser Asp Cys Tle Glu Gly Fhe Cys Cys
                 . 80
                                     1.90
Ala Arg His Fhe Trp Thr Lys Ile Cys Lys Fro Val Leu His Gin
                200
                                     205
Gly Glu Val Cys Thr Lys Gln Arg Lys Lys Gly Ser His Gly Leu
Blu Ile Phe Gln Arg Cys Asp Cys Ala Lys Giy Leu Ser Cys Lys
Val Trp Lys Asp Ala Thr Tyr Ser Ser Lys Ala Arg Leu His Val
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Cys Gln Lys Ile
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<.:11> 1809

-D12> DNA

· 213 · Hemo sapiens

 $+400 \times 71$ 

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and in this term and the same of the state of a section of the sec dominatign glopdoggapo glopostoras teoresistas titas sumb 1750 gerr viala Batorittya godagontyy yotanalayt yiradtoolm leet of themia 1809 · 211 · 363 FET 215 Homo sapiens · 400 - 72 Mr' Cys Fhe Lys Ala Leu Gly Arg Ash fer Val Leu Leu Arg Ile Cys Ser Phe Ile Pro Leu Leu Lys Ser Ser Val Leu Gly Ser Gly The Gly Glu Leu Ala Pro Pro Lys Met Ala Asn Ile Thr Ser Ser Gln Ile Leu Asp Gln Leu Lys Ala Pro Ser Leu Gly Gln Fhe Thr Thr Thr Pro Ser Thr Gln Gln Asn Ser Thr Ser His Fro Thr Thr The Thr Cer Trp Asp Leu Lys Fro Pro The Ser Gla Ser Cer Val Leu Ser His Leu Asp Phe Lys Ser Gln Fro Glu Fro Ser Fro Val Leu Ser Gln Leu Ser Gln Arg Gln Gln His Gln Ser Gln Ala Val 110 Thr Val Fro Fro Fro Gly Leu Glu Ser Phe Pro Ser Gln Ala Lys 125 130 Leu Arg Glu Ser Thr Fro Gly Asp Ser Pro Ser Thr Val Asn Lys 140 Leu Leu Gln Leu Fro Ser Thr Thr Ile Glu Asn Ile Ser Val Ser Val His Glo Fro Glo Fro Lys His Ile Lys Ieu Ala Lys Arg Arg Ile Fro Fro Ala Ser Lys Ile Pro Ala Ser Ala Val Glu Met Pro Oly Ver Ala Asp Val Thr Oly Len Ash Val Gln Fhe Gly Ala Leu

Old The Oly for Old Ero Der Led Ser Old The Oly Fer Ald Er

Ser Leu Ger Sin Ash Ser Ach Sin it. In the Leu Cor Leu Tyr Cer Lys Lat Ser Leu Ger Glu Fre Leu Ash Thr Ser Leu Ger Met Thr Cer Ala 255

Val Gln Ash Ser Thr Tyr Thr Thr Ser Val Ille Thr Ser Cys Ser 270

Leu Thr Ser Ser Ser Leu Ash Ser Ala Ser Fre Val Ala Met Ser 275

Jer Ser Tyr Asp Gln Ser Ser Val His Ash Arg Ille Fre Tyr Gln 300

Jer Fre Val Ser Ser Ser Glu Ser Ala Fre Gly Thr Ille Met Ash 315

Jly His Gly Gly Gly Arg Ser Gln Gln Thr Leu Asp Ser Lys Tyr 325

Jer Ser Lys Leu Leu Ser Trp Leu Val Fre Thr Lys Gln Arg 345

Lys Arg Ile Ala His Val Met Trp Lys Thr Fro Val Gly Gln Trp

Se: Nie Arg

.210 - 73

 $\mathcal{O}11 + 26$ 

(212 - DNA

<!!!3 · Artificial</pre>

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% 71 Artificial sequence

1.... 1-26

Killer Synthetic construct.

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431 % Artificial

47,300

· Mul · Artificial sequence

<2. .... 1-22

<223% Synthetic Trinstruct.

+4665 T4

tigataaactu lyssiaaanti aq 22

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Dog Barrio

- el III ENA
- Cli Artificial
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- ...12. DNA
- (213) Homo sapiens
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- googagtggy adaaaqootg gagotgggeg ggqgeeatgg egetgeeate 50 regardeetg efftggaaac figtgettet geagagetet geigtfeter 100 tgractcago ggtggaggag acggaegegy ggetytacae etgeaaeety 150 caccateast astgocasst stasyagage staggssyths dootggaggt 200 naccyaugyo cooccogosa cooccycsta stoggacyyo gagaayyayy 25% tyrtggoggt ggogogoggo goachogogo ttotgarnig rytgaaddyn 300. quicachtgt ggacogaccg gcachtggad gaggotomac adhtggtgca 360 Otgagacogg cagoogoog gygtobogea ogacogogog gacogortgo 400 tygaceteta egegteggge gagegeegeg eetaegggee eettettety 450 egegalegeg tygotgtggg egeggatgee titgagegeg ytgalttote blu actgogtate gageogotgg aggtogooga ogagggeace tactoctgoe 550 acctgcacca coattactgt ggcctgcacq aacgeegogt etteracetg 600 acggtogoog aaccocacyo ggagoogooc codoggggat otoogggcaa 650 oggotocago cacagoggog occhagyodo agachebaba etggegeged 700 gocacaacgt catcaatgto atogtocong agagoogage moactfoffo 750 Cagoagotyg outacytyct gychacycty otyctottea footyctaet 800 ggloantyto otostygosy osogsaggs osysggaggs tasgaatast 850 oqdaccayaa qtiggqaaag toaaagggga addatqttaa oftggoggag 400 ttoqotqtgg stigoagqgga boayatgott tacaqqaqtq aqqaqatbba +F0. refaqattan aaaaamaana teefuqagga qaaayegaaa etqgeeegea 1000 orrow and ing malasman at hyarotay analaamat in modaaasay 1950-

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## <:100: 77

Met Ala Leu Fro Ser Arg Ile Leu Leu Trp Lys Leu Val Leu Leu 1  $^{\circ}$  5  $^{\circ}$  10  $^{\circ}$ 

Gln Ser Ser Ala Val Leu Leu His Ser Ala Val Glu Gtu Thr Asp 20 \$25

Ala Gly Leu Tyr Thr Cys Asn Leu His His His Tyr Cys His Leu 35 40 45

Tyr Glu Ser Leu Ala Val Ard Leu Glu Val Thr Asy Gly Fro Pro 50 - 60

Ala The Fre Ala Tyr Orp Acr Oly New Lys (In Val Len Ala Val

<sup>·::10 · 77</sup> 

<sup>...11 - 341</sup> 

<sup>-112 -</sup> PRT

<sup>+113 ·</sup> Homo sapiens

5le	At i	715	Ala	1 : 5 ()	Ala	Lou	Leu	Thr	7) F	771	ind I	At i	117	His
Val	Trp	Thr	Asp	Ārg as	His	∵а1	Glu	Glu	Ala 130		Hn	Tal	Val	His 105
Trp	Asp	Arg	Gln	Fro 110	Pro	Gly	Val	Pro	H:s 115	Asp	Arg	Ala	Asp	Arg 100
I.eu	Leu	Asp	Leu	Tyr 125	Ala	Ser	Gly	Glu	Ang (34)	Ara	Ala	Tyr	Gly	Pro 135
Leu	Phe	Leu	Arg	Asp 140	Arg	Val	Ala	Val	Siy Idh	Ala	Asp	Ala	Fhe	Glu lu0
Arg	Gl7	Asp	Fhe	3e r 155	Leu	Arq	Ile	Glu	Pro 160	Leu	Glu	Val	Ala	Asp 165
Glu	Gly	Thr	Tyr	3er 170	Сув	His	Leu	His	His 175	His	Tyr	Cys	Gly	Leu 1∃0
His	Glu	Arg	Arg	Val 185	Phe	His	Leu	Thr	Val ) 4()	Ala	Glu	Pro	His	Aia 195
Glu	Pro	Pro	Pro	Arg 200	Gly	Ser	Fro	Glγ	Act.	Gly	Ser	Ser	His	Ser H10
Gly	Ala	Fro	Gly	Pr 5	Asp	Fre	Thr	Leu	Ala	Arg	Gly	ніз	Asn	∵al ≟5
Ile	Asn	Val	Ile	Mal 130	Pro	Glu	Ser	Arg	A. a .:35	His	Fhe	Fre	Gln	54n 240
Leu	Gly	Tyr	Val	Беча . 4 €	Ala	Thr	Leu	Leu	Lea Est	₽h∺	lle	Leu	Leu	Len
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Tyr	Ser	Asp	Gln	575 75	Ser	Gly	Lys	Ser	14.0 14.0	Gly	Lys	Asp	Val	At n 185
Leu	Ala	Glu	Phe	Ala 90	Val	Ala	Ala	Glγ	Asr . 95	Gln	Met	Leu	Tyr	Arg 300
Ser	Glu	Asp	Ile	G1n 305	Leu	Asp	Tyr	Lys	Asri 310	Asn	Ile	L∈u	Lys	Glu 515
Arg	Ala	Glu	Leu	Ala 320	His	Ser	Pro	Leu	Fro 325	Ala	Lys	Tyr	Ιlο	Asp 330
I.eu	Asp	Lys	Gly	Fhe 335	Arg	Lys	Glu	Asn	Суs 340	Lys				

<sup>+210&</sup>gt; 78 +211> 224+ +212> ENA +21++ Hime Dariéns

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tawagifica oifygggwda dagagdagag dadactogyg ootoatooit 1600.
rucia jatgo cagigagoda egitodatgod cattodytgo aaggeagata 1650
ifocagtoat attaacagaa caotootgag acagttgaag aagaaatago 1700
acadatoagg ggtactorot toacagotga tggttaabat tocabottht 1750
ttirtagorit toaaagatgo tgodagtgtt ogcobtagag ttatradaaa 1800
geragtinea aaarebageb atggystett tigealeetee eagetgeget 1850.
mattopaget gapagegaga typhaageaaa typt ageto teettameet 1900
gaajgggtot bootggalig gaagtoobot ggoatggtoa gtootoaggo 1950
echigaetoa agtytyeaca gacebotyty ttetycygyt gaaciaetyc 2000
ociotalcca gactggaaaa cocagaaaga tgggoottoc atgalitgott 2050
cathocagag ggarcagagg gootoootgt gcaagggatc aagcatotst 2100
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godattggtt caagggogta ataaatactt gogtattcaa aaa 2243
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# <4000-79

Met Ala Val Val Ser Glu Asp Asp Phe Gln His Ser Der Asn Ser 1 5 10 15

Thr Tyr Gly Thr Thr Ser Ser Ser Leu Arg Ala Asp Gln Glu Ala 20 25 30

Leu Leu Glu Lys Leu Leu Asp Arg Pro Pro Pro Gly Leu Gln Arg 35 45

Gly Ile Gly Ser Leu Leu Pro Trp Asn Fre Fhe Ile Thr Ala Lys  $\mathfrak{CS}$ 

Slu Tyr Trp Met Fhe Lys Leu Arg Ash Ser Ser Ser Fro Ala Thr

Thy Glu Act Fro Blu Bly Ser Ast liv Len Ash Tyr The Glu Ser 25 100

<sup>&</sup>lt;210. 79

<sup>&</sup>lt;211> 475

 $<sup>4.712 \</sup>pm PRT$ 

<sup>&</sup>lt;22130 Homo sapiens

Tyr Len Ala Val Ala Sor Thr Val Ir | Dir Mot Lou Cys Leu Val Ala Ash Fhe Leu Leu Val Ash Arg Val Ala Val His Ile Arg Val Iou Ala Ser Leu Thr Val Ile Leu Ala Ile Fhe Met Val Ile Thr Ala Leu Val Lys Val Asp Thr Ser Ser Trp Thr Arg Gly Phe Fhe Ala Val Thr Ile Val Cys Met Val Ile Len Ser Gly Ala Ser Thr Val Phe Ser Ser Ger Ile Tyr Gly Met Thr Gly Ser Phe Pro Met : 85 1 4 Arg Ash Ser Gln Ala Leu Ile Ser Gly Gly Ala Met Gly Gly Thr .'-)0 295 Val Ser Ala Val Ala Ser Leu Val Asp Leu Ala Ala Ser Ser Asp Val Arg Asn Ser Ala Leu Ala Phe Phe Leu Thr Ala Thr Ile Phe Leu Val Leu Cys Mot Gly Leu Tyr Leu Leu Ser Arg Leu Glo. (1) Tyr Ala Arg Tyr Tyr Met Arg Pro Val Leu Ala Ala His Val Ph-Ser Gly Glu Glu Leu Pro Gln Asp Ser Leu Ser Ala Pro Cer Val Ala Ser Arg Pho Ile Asp Ser His Th: Pro Pro Leu Arg Pis , , , , , , Ile Leu Lys Lys Thr Ala Ser Leu Gly Phe Cys Val Thr Tyr Val 10 Phe Phe Ile Thr Ser Leu Ile Tyr Pro Ala Val Cys Thr Asn Ile Glu Ser Leu Asn Lys Gly Ser Gly Ser Leu Trp Thr Thr Lys Phe Fhe Ile Fro Leu Thr Thr Fhe Leu Leu Tyr Asn Fhe Ala Asp Leu Cys Gly Arg Gln Leu Thr Ala Trp Ile Gln Val Fro Gly Fro Asm For Lys Ala Leu Fro Gly The Val Leu Leu Arg Thr Cys Leu Ile 380 Int Ion the Val Lon Dys Ash Tyr Glo Er Arr Val His Ieu Lys

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400
                                                               1 1
  in Val Val Ehe Olm Ser Asp Val Tyr Ero Ala Leu Leu Ser Ser
                   410
                                         415
 Ion Leu Gly Leu Ser Ash Gly Tyr Leu Ser Thr Leu Ala Leu Leu
                                         430
  For Gly Fro Lys Ile Val Pro Arg Glu Leu Ala Glu Ala Thr Gly
 Val Mat Ser Fhe Tyr Val Cys Leu Gly Leu Thr Leu Gly Ser
 Ala Cys Ser Thr Leu Leu Val His Leu Ile
                   470
<.210 - 30
 211 - ...2
 71....NA
7.113 Artificial
(100)
Artificial sequence Unit 1-22 Synthetic construct.
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 ''tigrigte accattigtet ge 22
 10 01
111 23
-11.11 DNA
1713 Homo sapiens
(1)
- l Artificial sequence
 1-23
32. 3 Cynthetic construct.
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04/01/00 - AZ
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c : Artificial
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1...l Artificial sequence
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TLL3. Fynthetic construct.
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2011 - 1544
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<::10> 84

567

€.112> FRT

<:.13> Homo sapiens

<:100 84

Met Ala Pro Leu Ala Leu His Leu Leu Val Leu Val Pro Ile Leu:

Low Ser Leu Val Ala Ser 3ln Asp Trp Lys Ala Glu Arg Ser Gln .20 -25

App Pro Phe Glu Lys Cys Met Gln Asp Pro Asp Tyr Glu Gln Leu 35 46

Leu Lys Val Val Thr Trp Gly Leu Asn Arg Thr Leu Lys Pro Gln -50 -55 -60

Arg Val Ile Val Val Gly Ala Gly Val Ala Gly Leu Val Ala Ala 65

Lys Val Leu Ser Asp Ala Gly His Lys Val Thr Ile Leu Glu Ala 80 90

Asp Asn Arg Ile Gly Gly Arg Ile Phe Thr Tyr Arg Asp Gln Asn 95 100 105

Thr Gly Trp The Gly Glu Deu Gly Ala Met Arm Met Pro Ser Ser 110 115

His Ard Ile Leu His Lys Leu Cys Gln Gly Leu Gly Leu Ash Leu 125 130

Thr Lys Phe Thr Gln Tyr Asp Lys Asn Thr Trp Thr Glu Val His 140 150

Old Val Lys Deu Ard Ash Tyr Val Val Glu Lys Val Fro Glu Lys 125 160

By Tyr Ala Let Arg fr. Gln Gln Tys Gly did Ser Fro 31u  $_{1.5}$ Roy 110 Tyr Gln Met Ala Leu Asn Gln Ala Leu Lys Asp Leu Lyr 190 Als Len Gly Cys Arg Lys Ala Met Lys Lys Phe Glu Arg His Thr Leu Leu Glu Tyr Leu Leu Gly Glu Gly Asn Leu Ser Arg Fro Ala .15 Val Glr Leu Lau Gly Asp Val Met Ser Glu Asp Gly Phe Phe Tyr Leu Ser Phe Ala Gla Ala Leu Arg Ala His Ser Cys Leu Ser Asp And Lou Gln Tyr Ger Arg Ile Val Gly Gly Trp Asp Leu Leu Pro Ard Ala Leu Leu Ser Ser Leu Ser Gly Leu Val Leu Leu Asn Ala Fre Val Val Ala Met Thr Gln Gly Pro His Asp Val His Val Gln lle Glu Thr Ser Pro Fro Ala Arg Asn te. Lys Val Leu Lys Ala ( ) Asp Val Val Leu Les Thr Ala Ser Gly Fro Ala Val Lys Arg He Thr Phe Ser Pro Pro Leu Pro Arg His Met Gln Glu Ala Leu Arg 335 3411 Arg Leu His Tyr Val Pro Ala Thr Lys Val Phe Leu Ser Phe Arg Arg Frc Phe Trp Azg Glu Glu His Ile Glu Gly Gly His Ser Asn Thr Asp Arg Pro Ser Arg Met Ile Phe Tyr Pro Pro Pro Arg Glu Cly Ala Leu Leu Leu Ala Cor Tyr Thr Trp Ser Asp Ala Ala Ala Ala Phe Ala Gly Leu Ser Arg Glu Glu Ala Leu Arg Leu Ala Leu 415 Asp Asp Val Ala Ala Leu His Gly Pro Val Val Arg Gln Leu Trp Asy Oly Thr Gly Val Val Lys Arg Trp Ala Cha Asy Gln His Ser 440 450 Fin Sly Bly Fhe Wel Wal Gln iro Er Ala Leu Try Gln Thr Eld

465

470 Asp Trp Thr Val Fro Tyr Cly Arg Illy Tyr Ehe Ala Gly 470 475.

%. His Thr Ala Tyr Fro His Gly Trp Val Glu Thr Ala Val Lys  $485 \,$  490  $\,$  495

Fig. Als Leu Arg Ala Ala Ile Lys Ile Asn Ser Arg Lys Gly Pro-500 - -510

Asp Thr Ala Ser Pro Glu Gly His Ala Ser Asp Met Glu 515 500 505

Tly Glm Gly His Val His Gly Val Ala Ser Ser Pro Ser His Asp 530 540

Leu Ala Lys Glu Glu Gly Ser His Pro Prc Val Gln Gly Gln Leu  $\pm 45$   $\pm 556$ 

Ser Len Gln Asn Thr Thr His Thr Arg Thr Ser His 560 565

-310> 85

-2115 3316

+312> DNA

1113 Homo sapiens

< 400 + 85 ctgacatgoc ctgactcggg acagetcaga gcagggcaga actggggaca 50 ctotgggoog goottotgoo tgoatggaog ototgaagoo accotgtoto 100 togaggaado acgagogagg gaagaaggas agggactogt gtggsaggaa 150 gareteagaq cegggaagee eccatteact agaaqeactq agaqatqegq 200 concetegea gggtotgaat ttootgotgo tgttoabaaa datgottttt 250 athttthact tittyttic eccacticeg acceegings tgatetyeat 300 cotgacatti ggagotgoca tottottgtg gotgatbacc agacetbaac 350 usatethase tettettgåd etgaacaate agtetgtggg aattgaggga 400 ngaqcaegga aqqqqqttto ocaqaaqaac aatqaeetaa caaqttqstq 450 offinicadat goraaqabta totargaygt fittobaaaga ggantegotg 500 tytitgadaa tyggodotgo ttyggatata gaaaaccaaa ocagooctac 550 avatnyotai ottacaBaba gutgtotyat agagdagayt acetyggtto 600 ityiitiitta hataaaggit ataaatbath unbadabbag titqtbqqqba 650 ming mical galatagroma gagninganow totokraatt ggottgthad 700 sistant ta itgataalitat laiit talat qabakiiftaq qabcaqaade 750

annum erat lannum nas sa laggit ban at ingoget get blede stytigt bada (88). rannicalaa uunattygtu otuatayyya afgtugamaa agyottoabo 850. iraiisotaa agatgatoat outtatgaac guutttaatg atgaeutgaa yill dicagagaggi gagaadhigtii gaattigagat ottatorota tatgatigotig 950-\*jsacotagg cadagagoad ttoagaaaad otgrigontoo tageoragaa 1000 sacetgageg teater sett caceagtggg accaeaggtg acceesaagg 10mm auditata aduqatuaaa atattyttis aaatystydt gestitoisa 1100 estatytaga geatgettat gageeeaste etgatyatyt gypeatates 1150 thandecete tggeteatat gittgagagg aftgfaragg eigitgigia 1200. cagototoga gocagagtto gattottoca angggatatt oggttgotog 1350 ctgacgacat gaagastttg aagoscasat tgtttseegs ggtgoetsga 1300 ctoottaada ggatotaoga taaqqtadaa aatgaggoda agadabostt 1350quagaagtto ttgttgaago tggotgttto cagtaaatto aaagagotto 1400aaaaqqqtat datdaqqdat qataqtttot qqqadaaqot datotttgda 1450. aagatocagg asagestogg oggaagggt' ogtgtaattg toactggage 1500 typecepaty tenacticay toatgapath officegyypa geaatgygat 1550. ahdaggtata tasaqottat agtosasadaq satqososqq taqqotqtaba 1600 tttacattac ctggggactg gacatcaggt cacgttgggg tgcccctggc 1650. tigoaattas gigaagsigg aagaigigs igscaigsas taciitacag 1709. traataatga hggagaggto tgoatcaagg gtacaaacgt gttcaaagga 1°50. tanctgaagg uccityagaa gacacaggan gooctggaca gtgatggbtg 19(0) gottoacada ogagadattg gtogotggot occgaatgga actotgaaga 1850. tratrodanog taaaaadaac attitraago iggoodaagg agaatacatt 1400 diaccagaga agatagaaaa tatotacaan aggaqtosac cagtqttacs 1.60. aattitigta caoqqqqaqa qottacqqto atoottagta qqaqtqqtqq 2000 timitgawa: agaigtacti secteatiti dageraagei tggygtgaag 2050. Trittity aggaistrity bomamamomam gitgimagng magocatitt #100. addadd ttiq cadaaaatid dgaaabaaad iddwinttaaa antiithqaab 2150 aditions and constitution to calculation and constitution at obtaining the 12% .

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<sup>&</sup>lt;216 - FG

<sup>-211 - 7 - +</sup> 

<sup>· /12 ·</sup> FFT

<sup>·213 ·</sup> Horr Papienr

<sup>- 400 -</sup> SC

Met Asp Ala Leu Lys Fr/ Fro Cys Leu Trp Arg Asn His Glu Arg

Thy Lyo Tye App Ary Asy Cor Cye Gly Ard Lye Arm Cor Glu Pro

Nor Fro His .or For The Ala Eon Ary Asp Ala Ala Fro Ger do de Fly L-u Asn the Leu Leu Leu Fhe Thr Lys Met Leu the lie the Ash Fhe Leu The Ser Pro Leu Pro Thr Pro Ala Leu Ile Cvs the Low Throthe Gly Ala Ala Ile Fhe Leu Trp Leu Ile Thr Ard Fre Gln Pro Val Leu Pro Leu Leu Asp Leu Asr. Asn Gln Ser Val 31: 11e Glu Gly Gl; Ala Arq Lis Gly Val Ser Gln Lys Asn Asn Asp beu Thr Ger Cys Cys Phe Ser Asp Ala Lys Thr Met Tyr Giu 130 Van Phe Glm Ard Gly Len Ala Val Ser Asp Asm Gly Pro Cys Leu 145 Gly Tyr Ard Lys Pro Ash Gln Pro Tyr Ard Trp Leu Ber Tyr Lys Glo Val Ser Asp Ard Ala Glu Tyr Leu Gly Ser Cys Leu Leu H:3 Ly: Gly Tyr Lys Ser Ser Pro Asp Gln Phe Val Gly Ile Phe Ala Gln Ash Arg Fro Glu Trp Ile Ile Ser Glu Leu Ala Cys Tyr Thr Tyr Ser Met Val Ala Val Fro Leu Tyr Asp Thr Leu Gly Pro Glu .115 Ala Ile Val Hig He Val Asn Lys Ala App Ile Ala Met Val Ile Cys Asp Thr Fro Glr. Lys Ala Leu Val Lou Ile Gly Asn Val Glu Lys Gly Fhe Thr Pro Ser Leu Lys Val :le Ile Leu Met Asp Pro Pbe Asp Asp Asp Leu Lys Glm Ara Gly Glu Lys Ser Gly Ile Glu The Leu Ser Leu Tyr Arp Ala Glo Ash Leu Gly Lys Glu His The Art Lys Fr. Val Fro Fro Cer Fré Slu Asp Leu Cer Val Ile Cyc The Shi Jer Sty The Str Sty Asp Fr Lys Sty Ala Met Sle Shr

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31%	His	Ala	Тут	750	E	Th:	Irr	Asp	Азр Збр	Val	Ala	He	Ser	Tyr 360
1.004	Fr	Leu	Ala	Hi: 361	Met	Fhe	-3]11	Arg	I le 379	Val	Gln	Ala	Val	Val 370
Tyr	Ser	Cys	Gly	Ala 380	Ar a	Val	Gly	Phe	Phe 395	Gln	Gly	Asp	11e	Ar;
[]*>1]	Leu	Ala	Asp	Asp 395	Met	Lys	Thr	Leu	Ly,3 400)	Pro	Thr	Leu	Ph⇔	Pro 405
Alā	Val	Pro	Arq	Le. 410	I.∈u	Asrı	Arq	Ile	Tyr 415	Asp	Lys	Val	Gln	Asr 4.5
elu	Ala	Lys	Thr	Pro 425	Len	Lys	Lys	Гhē	Leu 450	Leu	Lys	Leu	Ala	Va: 1
Ser	Ser	Lys	Phe	Ly: 440	Glu	Leu	Gln	Lys	G17 445	Ile	Il€	Arg	His	Arr 41
Sed	Fhe	Trp	Asp	Lys 455	1,611	Ile	Fhe	Ala	ມ່ງເຮ 1ພ0	Ile	Glr.	Asp	Ser	Le. 4 n S
Cly	Gly	Arg	Val	Ara 470	Val	Ile	Val	Thr	Gly 475	Ala	Ala	Pro	Met	Seri 4FJ
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ıγT	Glu	Ala	Tyr	Gly 500	Gln	Thr	Glu	Cys	Tt.r 5(15	Gly	Glγ	Cys	Thr	Ph:e 510
Thr	Leu	Fro	Gly	Asp. 515	Trp	Thr	Ser	Gly	H:s 520	Val	Gly	Val	Pro	Lei 523
Ala	Cys	Asn	Tyr	Val 530	Lys	Leu	Glu	Asp	Val 535	Ala	Ast,	Met	Asn	Tyr 540
The	Thr	Va]	Asn	Asn 545	Glu	Gly	Glu	Väl	Cys 550	Ile	Lys	Gly	Thr	Asr 555
∵.1	The	Lys	Glÿ	777 560	Len	$\Gamma^{I}_{\alpha}$	ASF	Fra	Glu 565	Lys	Thr	Gln	Glu	Ala 570
Lon	Ask	Ser	Asp	Gly	Trţ	Leu	His	Thr	Gly •80	Asp	Ile	Gly	Arg	Trp 585
Irmi	Fre	Acri	Glï	Thr	Leu	Lys	1] 6	Ilo	Asp 191	Arg	Lys	Lys	Asn	Ile
ELG	1778	Len	Ala	Gla €.1	C.Y	Gla	Tyr	II.	Ala F1	irc	Sin	I.ÿ.÷	He	Glu £15

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- My Mu Cer leu Ary Ser Ser leu Val Gly Val Val Val fro Asp. 645
- The Asp Val Leu Fre See Floo Alla Ala Lys Leu Gly Val Lys Gly 650 655
- Ser The Glu Glu Leu Cys Glr. Asn Gln Val Val Arg Glu Ala Ile 675
- Leu Glu Asp Leu Gln Lys Ile Gly Lys Glu Ser Gly Leu Lys Thr 640  $\,$  685
- The Glu Sln Val Lys Al4 The Fhe Leu His Pro Glu Fro Phe Ser 695 700
- The Glu Asn Gly Leu Leu Thr Fr. Thr Leu Lys Ala Lys Arg Gly 710 715 7.0
- Glu Leu Ser Lys Tyr Fhe Arg Thr Gln Ile Asp Ser Leu Tyr Glu
  725 730 730

His Ile Gln Asp

<sup>- 3105 87</sup> 

<sup>· 111&</sup>gt; 2725

<sup>-212 -</sup> DNA

<sup>&</sup>lt;213> Homo sapiens

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m CC}
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chair malay teacctione terretrocto gginggaceca greetoctio 850
isaniatyt gecathaan teageamaay aggeagagta colotygmea 900.
Tax Fradago tgaabbytry boubburbour ttotgearba Hauttgagog 450
that adalyst gratgeages gealagyaboo bacabecate lagstbeaged 1000
etgacodact necagaraan aaggto/toa atqtqcotyt ggergtratt 105)
истаримансе диссенитта ectytaciga atqutycuct itetyettte 110).
ageocagggg gigietecte agaigataae agitticati gaeggetaet 1150
atgaygaacc catggutgig gtigcactgt ttggtctgag gggcaticag 1.0).
natactunda teageateaa gaatgubogo gtgtoteage actacaaggo 1350.
carectizact gocactitica aditigition gyaggosaaq tituotytigg 130)
thotypaaga ggacotqgac attgotytyy attitttoag tthootyago 1350
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otggaatgan bagggytatg aababaggo tgaggadoba geahtabtgt 1450
acceteteea gaccatect egectiquet egetertear gagatectte 150 /
tacaagaagg agottgagoo caagtggoot acaceggaaa agototggga 1550
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atgaatgget actiteaega ggeetaette aagaageaea agtteaaeae 1700
gqttccaggt gtccagctca ggaatgtgga cagtctgaag aaagaagctt 1750
atgaagtgga agttoacagg etgetcagtg aggetgaggt tetggaecae 1800
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teettitiini gaadonetii iraaadaaja agadaariin ajaedoiine võõb
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<210 - 88

311 - 660

-..12 · E·F.T

:213 · Homo sapiens

## <400+ 98

Met Asp Asp Trp Lys Pro Ser Pro Leu Ile Lys Fro Phe Gly Ala 1 5 10

Arg Lys Lys Arg Ser Trp Tyr Leu Thr Trp Lys Tyr Lys Leu Thr 20 25

Asn Gln Arg Ala Leu Arg Arg Fhe Cys Gln Thr Gly Ala Val Leu 35 40 45

Fhe Leu Leu Val Thr Val Ile Vâl As<br/>n Ile Lys Leu Ile Leu Asp50 - 55 - 60

Thr Arg Arg Ala Ile Ser Glu Ala Asn Glu Asp Fro Glu Fro Glu 65 70 75

Gln Asp Tyr Asp Glu Ala Leu Gly Arj Leu Glu Ir - Fre Arg Arg 80 85 40

Ard Gly Ser Gly Erc Ard Ard Val Leu Asp Val Glu Val Tyr Ser 95 100

Cer Arg Ser Lys Val Tyr Val Ala Val Asp Gly Th: Thr Val Leu 110 115 120

Riu Asp Glu Ala Ara Gla Ula Gly Ara Gly Ho Sic Vel 1.6 Val 125 135

on Ash Min Ala Throtty His Val Met Aladys Arr Val The Arr The Tyr Ner Er His Glu Amp Glu Ala Met Wal Lou the Leu Asn Mot Val Ala Fro Gly Ard Val Leu ile 'ys Thr Val Lys Asp Glu Gly Ser The His Leu Lys Asp Thr Ala Lys Ala Leu Leu Arg Ser ren Gly Ser Glm Ala Gly Fro Ala Leu Gly Tip Arg Asp Thr Trp Ala Phe Tal Gly Ary Lys Gly Gly Fro Tal The Gly Glu Lys His Ser bys Ser Ero Ala Leu Ser Ser Trp Gly Asp Fro Val Leu Leu .:30 11 1 Lys Thr Asp Val Pro Leu Ser Ser Ala Glu Glu Ala Glu Cys His ....5 Trp Ala Asp Thr Glu Leu Asn Ard Ard Ard Ard Ard Ard Phe Cys Der Lys Val Glu Gly Tyr Gly Ser Val Cys Der Cys Lys Asp Fro Thr 2015 - 189 Pro fle Glu Phe Cer Fro Asp Pro Leu Pro Asp Ash Lys Val Leu Asn Val Pro Val Ala Val Ile Ala Gly Asn Arg Pro Asn Tyr Leu 1115 Tyr Arg Met Leu Arg Ser Leu Leu Ser Ala Gln Gly Val Ser Fro -10 Gln Met Ile Thr Val Fhe Ile Asp Gly Tyr Tyr Glu Glu Pro Met £4 (: Asp Val Val Ala Leu Phe Gly Leu Arg Gl; He Gln His Thr Pro  $\mathcal{L}_{\mathbf{r}_{1}}\mathbf{r}_{1}\mathbf{r}_{2}$ lle Ser Ile Lys Asn Ala Arg Val Ser Gln His Tyr Lys Ala Ser Leu Thr Ala Thr the Asn Leu the Fro Glu Ala Lys the Ala Val Val Teu Glu Glu Asp Leu Asp Ile Ala Val Asp the The Ser the len der Glin Ger Ile His beu Leu Gli Glu Asp Asp der ben Tyr Typ II of Cor Ala Try Ach Asy Gin Gly Tyr (I'd Hir The Ala Hi).

4 £ E . . . Aug Fr. Ala Teu Lou Tyr Arg Val Blu Thr Met Fr. Gly Let Bly Trị Val Leu Arg Ara Ser Leu Tyr Lys Glu Glu Leu Glu Fr - Lys Try Tro Thr Fro Gl: Lys Ieu Trp Asp Trp Asp Met Trp Met Ar; Mot Fro Glu Gln Arg Arg Gly Arg Glu Cys Ile Ile Fro Asp Val  $4 \otimes 5$ 495 Ber Arg Ser Tyr His Fhe Gly Ile Val Bly Leu Ash Met Ash Gly 501  $C^{-\frac{1}{2}+\frac{1}{2}+\frac{1}{2}}$ Tyr Fhe His Glu A... Tyr Phe Lys Lys H: Lys Fhe Asn Thr Val 514 5,91 tre Gly Val Gln Lea Arg Asn Val Asp Ser Leu Lys Lys Glu Ala Tyr Glu Val Glu Val His Arg Leu Leu Jer Glu Ala Glu Val Leu Asp His Ser Lys Ast. Fro Cys Glu Asp Sor Phe Leu Pro Asp Thr alu Gly His Thr Tyr Val Ala Phe Ile Ard Met Glu Lys Asp Asp Asp Phe Thr Trp Thr Gln Leu Ala Ly: Cys Leu His Ile Trp 590 - 590Asp Leu Asp Val Arg Gly Asn His Arg Gly Leu Trp Arg Leu Fhe 6j1(t Arg Lys Lys Asn His Phe Leu Val Val Gly Val Pro Ala Ser Pro 61.0 Tyr Ser Val Lys Lys Pro Pro Ser Val Thr Pro Ile Phe Leu Glu Fro Pro Pro Lys Glu Glu Gly Ala Pro Gly Ala Pro Glu Gln Thr <.210> 89 <.:11> 25 KRIZM ENA r/13 Artificial

4.1273

10212 Artificial sequence

clik 1-25 %22: Zymtheti: mnstruct.

84" 1 × 42

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  %10 + 30
%11 + 32
%12 * %NA
 1013 · Artificial

<220 -
-.221 - Artificial sequence
-.222 - 1-22
-.223 - Synthetic construct.
</pre>
 4000
  int tallonag godacgggod ac 22
 1°10 + 91
111 × 24
112 × 50A
113 - Artificial
 < > > > >
 .... Artificial sequence
 1.1.4
K...'3 Synthetic construct.
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 -c⇔nggcaga gatgcagtac aggc 24
2.10 = 9.1
6 . 11 1 . 6
- .... - DNA

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1.1. Artificial sequence
1.1.1-26
4.1.3 Synthetic construct.
4110 - 91
 conceanag giggaiggai iggete 26
3.110. 93
= 1.1<sub>*</sub> 47
 . III. DNA
1.13 Artificial
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r...l Artificial sequence
+2... 1-47
+2.3 - Synthetic construct.
24005 G3
of macrical daggatuagg coafgqfqct afficieaac afggtad 47
10.102 94
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+(11 + 303)
+ 21. + 1NA
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4000 94 riggaografiq gyntgofiggt gyraalydoor aalyallotyy laalu biglot (b) otottggaad padraparer gittaaagsa oolaagsaso atttaaagse 100 actggaaatt tgitgtotau tguttgtugg tgaataaagg agggragaat 15 ' qgatgattte atotecatta gootgetgte totggetarg ttggtqggat(z0)gttacgtggc ogyaatcatt coottggotg ttaattteto agaggaacga 250 ctgaagotgg tgaotgtttt yggtgotggo ottototgtg gaactgotot 300 ggcaytoato gtgcotyaag gagtabatgo cotttatgaa watattottg 350. agggaaaada coarcaagda agtgaaadad afaatgtgat tgcatcagac 400. aaagcagnag laalalteagt tyteestgaa catgajraes decargaesa 450 cacacagoty catgodiata tiggifithe cotogitizing gootfootite 5.00. toatyttgot ygtggaddag attggtaadt oppatytgda ffotabtgab 550 gatobagaag bagbaaggto tagbaattob aaaatbabba bbadgotggg 600 totygttigto batgotgoag otgatiggtigt typittiggga geagragmat 600. ctaottoaca qabbaytgto cagitaatti tigittigiggo aatbatgota 700cataaggoad dayotgotti tygaasiggit tooftottya tydatyotyg  $T(\cdot)$ ottagagogg aarogaatoa gaaagcaott gotggtotit goattggoag 800. cabbagttat gtobatggtg abatacttag gabtgagtaa gagbagtaaa 850. gaagoosttt dagaggtgaa ogodadggga gtggddatgd tiffdtdtgtg (m. egggaeattt offitatgffg obabagfaba fgfoofood gaggfgggog  $950^{\circ}$ yaatagygca cagocasaag ocogatgesa ogggagygag aggoctoage 1000 tgootggaag tggcagecot ggttotgggt tgcctcatcc otctcatcct 1050 gtbagtagga cascagbatt aaatgttbaa ggtobagbot tygtobaggg 1100 coyttigeda todagigaga adagooggda ogigadagoi adidactido 1150. tragiciett greinandti georgatetet acatghaire etagagiera 1200gaggggaggt gaggttaaaa cctgagtaat ggaaaagcff ttagagtaga 12FC aacacattta egitgeägit agetatagan athoceattgi gitatottit 1300 aaaaugocot igacattitg ogitttaata tiirtotoitaa ooctaminin 1350. ayggaagatu daatifadti ttaaggadaa dadgadaant toafantnan 1460. autguaateu thattatuaa watacautgi totutaatta ahitatut it 14°0.

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- <2105 95
- <.:11: 307
- <.:12% PRT
- <.13 Homo sapiens

#### <400> 95

- Met Asp Asp Fhe Ile Ser Ile Ser Leu Leu Ser Leu Ala Met Leu 1 5 15
- Val Gly Cys Tyr Val Ala Gly Ile Ile Pro Leu Ala Val Asn Phe
- Ser Glu Glu Arg Lea Lys Leu Val Thr Val Leu Gly Ala Gly Leu 35 40
- Leu Cys Gly Thr A:a Leu Ala Val Ile Val Fro Glu Gly Val His
- Ala Leu Tyr Giu App Ile Leu Glu Gly Lys His His Gl<br/>n Ala Ser  $\frac{1}{10}$
- Clu Thr His Asn Val Ile Ala Ser Asp Lys Ala Ala Glu Lys Ser 80 85
- Val Val His Glu His Glu His Ser His Asp His Thr Gln Leu His  $\frac{495}{100}$
- Ala Tyr Ile Gly Val Ser Leu Val Leu Gly Phe Val Phe Met Leu 110 1.0 1.0
- Leu Val Asp Gln II $\oplus$  Gly Asn Ser His Val His Ser Thr Asp Asp 135
- Fro Glu Ala Ala Arg Ser Ser Asn Ser Lys Ile Thr Thr Let 140 145 145
- Gly Leu Val Val His Ala Ala Ala Asp Gly Val Ala Leu Gly Ala 155  $\phantom{0}160$   $\phantom{0}165$
- Ala Ala Ser Thr Ser Gin Thr Ser Val Gln Leu Ile Val Fhe Val 179 199
- Ala Ile Met Leu His Lys Ala Pro Ala Ala Ebe Gly Leu Val Ser 185 190 190
- Fhe Leu Met His Ala Gly Leu Glu Arg Ash Arg Ile Arg Lys His 200 205 210
- Leu leu Val Fhe Ala Leu Ala Ala Pro Val Mot Cer Mot Val Thr 21: 225
- Tyr Len Gly Let Ser Lys Ser Ser Lys Sin Ala Lei Ser Sin Val

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730
                                          135,
 Astr Ala Thr Sly Val Ala Met Leu Fre Ser Ala Sly Thr Phe Leu
                   . 45
                                          250
  Tyr Val Ala Thr Val His Val Leu Fro Glu Val Gly Gly Ile Gly
                   .:60
 His Ser His Lys Pro Asp Ala Thr Gly Gly Arg Gly Leu Ser Arg
 Leu Glu Val Ala Ala Leu Val Leu Gly Cys Leu Ile Pro Leu Ile
 Let Ser Val Gly His Glr. His
                    195
3210 - 26
011 + 15
0217 + DNA
...l Artificial
 1120
 W21 - Artificial Requence
 17.72 = 1-25
P.23 synthetic construct.
(4.10) + 45
 j'tutuqqtg aataaaggaq ggcag 25
1910 - 77
1911 - 75
- 212 - PNA
- 2013 - Artificial
1....0
1001 - Artificial sequence
4007 Synthetic construct.
⇒ i)(i = 97
-stargeteat utteatggae aactg 25
+.10 - 98
1.11 - 10
· . l. · INA
1.11 · Artificial
P. (1)
<.?l- Artificial sequence</pre>
1...: 1-50
- Lase Synthetic construct.
+ 4001 98
 Traigatif : Shotonatta goutgotath totapotath timatompat 50
+210× 99
+211+ 1424
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+211> 401

<21U> FRT

<2130 Home sapiens

<400> 100

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Asn Tyr Trp Ile Ala Ser Ser Arg Ser Val Asp Leu Gln Thr Arg 45 46

The Met Glu Leu Glu Gly Arg Val Arg Arg Ala Ala Ala Glu Arg 50 55

Gly Ala Val Glu Lou Lys Lys Asn Glu Pho Gln Gly Glu Leu Glu 65

Lys Gln Arg Glu Gln Leu Asp Lys Ile Gln Ser Ser His Asn Phe 30 85 85

Gln Leu Glu Ser Val Asn Lys Leu Tyr 31n Asp Glu Lys Ala Val 95 103

Leu Val Asn Asn Ile Thr Thr Gly Glu Ard Leu Ile Arg Val Lei 116 116 126

Gln Asp Gln Leu Lys Thr Leu Gln Arg Asr. Tyr Gly Arg Leu Gln 135 130 135

Gin Asp Val Leu Gl<br/>n Phe Gin Lys As<br/>n Gir Thr Asn Leu Glu Arg\$140\$ \$145\$

Lys Phe Ser Tyr Asp Leu Ser Gln Cys fle Asn Gln Met Lys Glu 155 160 165

Val Lys Glu Glu Cys Glu Glu Arg Ile Glu Glu Val Thr Lys Lys 170 175

Gly Asn Glu Ala Val Ala Ser Arg Asp Leu Cer Glu Asn Asn Asp 185 190 1 15

Gln Arg Gln Gln Leu Gln Ala Leu Ser Glu Pro Gln Fro Arg Leu 200 - 205 - 210

Gln Ala Ala Gly Leu Pro His Thr Glu Val Pro Gln Gly Lys Gly 215 226

Ash Val Leu Gly Ash Ser Lys Ser Gln Thr Fro Ala Fro Ser Ser 240 ,38

- M . Val Val Len Asp Ser Lys Arg Glm Val Glu Lys Tlm Glu Thr -250 -25
- Fr. Gln Glu Fro Gly Arg Glu Gln Val Val Glu Asp Arg Fro Val 235 235
- Gly Gly Arg Gly Phe Gly Gly Ala Gly Glu Leu Gly Gln Thr Pro
- Gln Val Gln Ala Ala Leu Ser Val Ser Gln Glu Asn Pro Glu Met 305 (10) 315
- 31u Gly Pro Glu Arg Asp Gln Leu Val The Pro Asp Gly Gln Glu 320 - 325
- Glu Glu Gl<br/>n Glu Ala Ala Gly Glu Gly Arg As<br/>n Gl<br/>n Gl<br/>n Lys Deu 335  $$340\ \mbox{ }$
- Arg Gly Glu Asp Asp Tyr Ash Met Asp Glu Ash Glu Ala Glu Ser 350 360
- Glu Thr Asp Lys Gln Ala Ala Leu Ala Gly Asn Asp Arg Asn Ile 365  $^{\circ}$
- Asp Val Phe Asn Val Glu Asp Gln Lys Arg Asp Thr Ile Asn Leu 385 - 390
- leu Asp 3ln Arg Glu Lys Arg Asn His Thr Leu 395
- <2101-101
- ·1211 · 3671
- <2121 DNA
- <213 Homo sapiens
- <400: 101
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- qqaqotcaco aaccatagca gotgocaaga goorccaggo cotgggtoco 150
- tgccatgggg gagccaaggg asacctgggg estgctggat ggcttcncga 200
- tittingnggg tigtgitggt gotgatagat gothtgogat tigacticgo 250
- chagnoppag cattoabacg typoctagaga gootcotgto teoctabrot 300
- teetagadaa actaagetee tigeagagga teetagagat teagecodae 350
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+211 + PRT +514 + Home supiens

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Met Glm Lys Ala Ser Val Leu Leu Fhe Leu Ala Trp Val Cys Pho

Lou Phe Tyr Ala Gly Ile Ala Leu Phe Thr Ser Gly Phe Leu Leu

Thr Ard Leu Glu Leu Thr Ash His Ser Ser Cys Gln Glu Pro Pro

Bly Fro Gly Ser Lea Pro Trp Gly Ser Gla Gly Lys Fro Gly Ala

Cys Trp Met Ala Ser Arg Phe Ser Arg Val Val Leu Val Leu Ile

Asp Ala Leu Arg Phe Asp Phe Ala Gln Pro Gln His Ser His Val HO

Pro Arg Glu Pro Pro Val Ser Leu Fro Fhe Leu Gly Lys Leu Ser 105 100

Der Leu Gln Arg He Leu Glu Ile Gln Fro His His Ala Arg Lou 130 115

Tyr Arg Ser Gln Val Asp Pro Fro Thr Thr Thr Met Gln Arg Leu

Lys Ala Leu Thr Thr Gly Ser Leu Pro Thr Phe Ile Asp Ala Gly

Cer Ash the Ala Ser His Ala Ile Val Glu Asp Ash Leu Ile Lys

Ilt. Leu Thr Ser Ala Gly Arg Arg Val Val Phe Met Gly Asp Asp

The Trp Lys Asp Iou Fho Fro Gly Ala Fho Sor Lys Ala Fho Fho 1 5 1

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Eyr	Ser	Fre	Thr	Alu 305	Val	Phe	Pro	Ser	Th: 110	Pro	Fro	Glu	Glu	From
Glu	Val	He	Pro	51.n 32.∋	Val	Ser	Leu	Val	Fire Ze <sup>©</sup>	Thr	Leu	Ala	Leu	[1474] [5-50]
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Leu	Ala	Gln	Ala	79 r 365	Ala	Leu	His	Leu	748 Ti 37 (1	Ala	Gln	Gln	Vai	375 375
Ara	Fhe	Leu	His	Tt.r 5500	Tyr	Ser	Ala	Ala	Thr 785	Gln	Asp	Leu	Gln	A1 a 3 3 ()
Lys	Glu	L⇔u	His	G-11 : 55	Leu	Gln	Asn	Leu	Ehe 400	Ser	Lys	Ala	Ser	A15 405
Asp	Туг	Gln	Trp	Leu 110	Leu	Gln	Ser	Pro	Lys 415	Gly	Ala	Glu	Ala	Thr 429
Leu	Fro	Thr	Val	116 425	Ala	Glu	Leu	Gln	Glr. 430	Phe	Leu	Arg	Gly	Ala 435
Ara	Ala	Mot	Clie	11e 449	Glu	Ser	Trp	Ala	Arg 445	Fhe	Ser	Leu	Val	Arg 450
Met	Āla	Gly	Ciy	Thr 455	Ala	Leu	Leu	Ala	Ala 460	Ser	Cys	Phe	Ile	CY8 465
;,e.,	io.	Аlа	Ser	Giri 410	Trp	Ala	Ile	Ser	Fro 475	Giy	Fhe	Fro	Phe	Сув 480
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776 The life line der May Erro Erro Throder Olio Ala Aspolem Asp Tyr

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	(:]1	Leu	Gly	Ser 830	Val	Tyr	Ser	Ala	A1 1 8 15	Met	Val	Thr	Ala	] t 3 }
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His	I.eu	Len	Ala	Al 1 375	Glÿ	He	Erc	Val	71.1 980	Thr	Fro	Gly	Pro	Pho 331
Thi	Val	Pro	Trp	Gln 830	Aia	Val	Ser	Ala	Tir	Ala	Leu	Met	Ala	Tha 300
Glin	Thr	Phe	Tyr	Ser a:)',	Thr	Gly	His	Gln	Pro 910	Val	Phe	Pro	Ala	11.
His	Trţ	His	Ala	Ala 920	Fhe	Val	517	Fhe	P1 0 92 0	Glu	Glγ	His	Gly	Ser Pag
C	Thr	Tip	Lou	From	Ala	Leu	I.e.u	Val	$\frac{31}{4}$	Ala	Asn	Thr	Phe	75.10 1941
sei	His	Leu	Leu	930 940	Ala	Val	Gly	Cys	Fro St.G	Leu	Leıı	Leu	Leu	Trp
Fre	Phe	Lou	Cys	955 955	Ser	Gln	Gly	Leu	Ar 4 970	Lys	Arg	Gln	Gln	Pr
Fro	Gl;	Asn	Glu	Ala 980	Asp	Ala	Arg	Val	A1 4 985	Fro	Glu	Glu	Glu	(3 <u>.1</u> ), 2/4),
Glu	Pro	Leu	Met	Gl u 945	Met	Arg	Leu		Asp Li)(i )	Ala	Pro	Gln		Ph:6
Tyr	Ala	Ala	Leu 1	Leu 1010	Gln	Leu	Gly		Lys 1015	Tyr	Leu	Phe		Leu 10/10
СГу	Ile	9:11	110	1.00 1025	Ala	Cys	Ala		Ala 1050	Ala	Ser	Ile		Ard 1025
Ara	Нίε	Leu	Met 1	7al 940	Trp	Lys	Val		Ala .045	Fro	Lys	Phe		Phe 1050
cla	Ala	Val	G17 1	Fhe	Ije	Val	Ser		Val CAS	Gly	Len	Leu		Gly 10 <i>6</i> 5
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+710 + 103 +.11 + 1743 +2125 PNA +.155 B.m. sapiebs

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- Met Ser Tyr Ash Sly Leu Hic Gln Ard Val Phe Lys Glu Leu Lys 15
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- Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Sor Val Val Leu Thr
  35 49 49
- Ala Pro Glu Lys Trp Lys Aru Ash Fro Glu Asp Leu Pro Val Ser 55 -60
- Met Gl<br/>n Gl<br/>ń Ile Tyr Ser Ash Leu Lys Tyr Ash Val Ser Val Leu  $_{65}$
- Asn Thr Lys Ser Agn Arg Thr Trp Ser Gln Cys Val Thr Asn His F) \$85\$
- Thr Leu Val Leu Thr Trp Leu Glu Fre Asn Thr Leu Tyr Cys Val 95 100
- His Val Glu Ser Hee Val Pr Gly Fr Fre Arg Arg Ala Gln Fro 115 115
- Ser Glu Lys Gln Cys Ala Ary Thr Len Lys Ast Gln Ser Ser Glu 120 130
- The Lys Ala Lys (le Ile Ih) Trp Tyr V41 Let Fro Ile Cer Ile 14% 14%
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<sup>&</sup>lt; 0.102 104

<sup>&</sup>lt;211 = 442

<sup>&</sup>lt;212≥ FRT

<sup>&</sup>lt;21: Home sapiens</pre>

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Ser	Ser	Leu	Asn	Asp 230	Fic	Gln	Fro	reg	Gly 235	Asn	hen	Arg	Fro	Pro 240
∷ln	Glu	Glu	Glu	(31). 145	Val	Lys	His	Leu	Gly 250	Tyr	Ala	Ser	His	Lei
Met	Glu	Ile	Fhe	C75 250	Asp	Ser	Glu	Glu	Asn 255	Thr	Glu	Glÿ	Thr	Sej: 2.7(
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Thr	Glr.	$G_{\perp}\gamma$	Thr	Leu ≥20	Leu	Glu	Ser	Gln	Ala 325	Ala	Leu	Ala	Val	1.64 3.34
Gly	Pro	Gin	Thr	Leu E35	Gln	Tyr	Ser	Tyr	Thr 340	Pro	Gln	L∈u	Gln	A3p 34°
Leu	Asp	Fre	I.eu	Ala βòΩ	Gln	Glu	His	Thr	Asp 355	Ser	Glu	Glu	Gly	Pro 360
Glu	Glu	Glu	Fro	Ser 365	Thr	Thr	Leu	Val	Asp 370	Trp	Asp	Pro	Gln	Th:
Gly	Arg	Leu	CYS	I.e 380	Pro	Ser	Leu	Ser	Ser 385	Phe	Asp	Gln	Asp	3.m Sei
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Gly Ala Ala Val Leu Leu Lys Asp Tyr Val Thr Gly Gly Ala Cys

Fro Ser Lys Ala Thr Ile Pro Gly Lys Thr Val Ile Val Thr Gly

Ala Asr Thr Gly Ile Gly Lys Gln Thr Ala Leu Glu Leu Ala Arq

Arg Gly Gly Asn Ile Ile Leu Ala Cys Arg Asp Met Glu Lys Cys

Glu Ala Ala Ala Lys Asp Ile Arg Gly Glu Thr Leu Asn His Hiz

Val Ash Ala Arg His Leu Asp Leu Ala Ser Leu Lys Ser Ile Arg

Giu Phe Ala Ala Lys Ile Ile Glu Glu Glu Glu Arg Val Asp Ile

Leu Ile Asn Asn Ala Gly Val Met Arg Cys Pro His Trp Thr Thr

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Glu Asp Glu Glu Val Ala Arg Arg Leu Trp Ala Glu Ser Ala Arg 305 310

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- Fhe Ser Ala Leu Thr Ser Val Ala Arg Ala Leu Ala Fro Glu Arg  $\frac{35}{40}$
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- Arg Leu Arg Asp Leu Thr Arg Phe Tyr Asp Lys Val Leu Ser Leu 65 75
- His Glu Asp Ser Thr Thr Pro Val Ala Ash Pro Leu Leu Ala Pho  $\pm 5$
- Thr Leu Ile Lys Arı Leu Gln Ser Asp Frp Arg Asn Val Val His  $\frac{1}{100}$
- Ser Leu Glu Ala Ser Glu Asn Ile Arg Ala Leu Lys Asp Gly Tyr 110 120 120
- Glu Lys Val Glu Gli. Asp Leu Pro Ala Phe Glu Asp Leu Glu Gly 1.59
- Ala Ala Arg Ala Leu Met Arg Leu Gl<br/>n Asp Val Tyr Met Leu Asn 149 145
- Val Lys Gly Leu Ata Arg Gly Val Phe Gl. Arg Val Thr Gly Ser  $15^{\circ}$  160 165
- Ala Ile Thr Asp Leu Tyr Ser Pro Lys Arg Leu Phe Ser Leu Thr 170 175
- Gly Asp Asp Cys Phe Gln Val Gly Lys Val Ala Tyr Asp Met Gly
  185 196
- Asp Tyr Tyr His Ala Ile Fro Trp Leu Glu Glu Ala Val Ser Leu 200 200
- Fhe Arg Gly Ser Tyr Gly Glu Trp Lys Thr Glu Asp Glu Ala Ser 215 - 216
- Teu Glu Asp Ala Leu Asp His Lou Ala The Ala Tyr Fhe Ard Ala 290

Bly Ash Val Cer Cas Ala Lea Cer Leu Cer Arg VI ( Fig Leu Leu Tyr Ser Pro Asp Ash Lys Arg Met Ala Arg Ash Val Leb Lys Tyr Glu Arg Leu Leu Ala Glu Ser Fro Asn His Val Val Ala Glu Ala Val Ile Gln Arg Pro Asn Ile Pro His Leu Gln Thr Arg Asp Thr Tyr Glu Gly Leu Cys Gln Thr Leu Gly Ser Gln Fro Thr Leu Tyr Gln Ile Pro Ser Len Tyr Cys Ser Tyr Glu Thr Asn Ser Asn Ala Tyr Leu Leu Clm Pro Ile Arg Lys Gen Val Ile His Leu Glu 340 Pro Tyr Ile Ala Leu Tyr His Asp Fhe Val Ser Asp Ser Glu Ala 3 % () 500 Gln Lys Ile Arg Glu Leu Ala Glu Pro Trp Leu Gln Arg Ser Val Val Ala Ser Gly Glu Lys Gln Leu Gln Val Glu Tyr Arg Ile Ser 1 .. () Lys Ser Ala Trp Low. Lys Asp Thr Val Asp Pro Lys Leu Val Th: Leu Asn His Arg Ile Ala Ala Leu Thr Gly Leu Asp Val Arg Pro Pro Tyr Ala Glu Tyr Leu Gln Val Val Asn Tyr Gly Ile Gly Gi; His Tyr Glu Pro His Phe Asp His Ala Thi Ser Pro Ser Ser Pro Leu Tyr Arg Met Lys Ser Gly Asn Arg Val Ala Thr Fhe Met 110 41.5 460Tyr Leu Ser Ser Val Glu Ala Gly Gly Ala Thr Ala Phe Ile Tyr 470 Ala Asn Leu Ser Val Pro Val Val Arg Asr. Ala Ala Leu Fhe Trp 485 Trp Asn Leu His Arg Ser Gly Glu Gly Asp Ser Asp Thr Leu His Ala Gly Cys Fro Val Lew Val Gly Asp Lys Trp Val Ala Asn Lys 525 Try The His Glu Tyr Gly Glu Glu Ehe Ard Ard Err Cys Cer Cer

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ACCOMMENTATION Artificial Sequence 1... 12 1-49 Synthetic construct.

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. 3.5 . 35 \_40 lle Len Leu Fri Gln Phe Lou Gly Val Leu Leu Thr Leu Leu Tyr Ile Thr Arg Val Glu Asp Ile Ile Met Glu His Ser Val Thr Asp 260 Bly Leu Leu Gly Fro Gly Ala Lys Fro Ser Val Glu Ala Ala Gly 275 The Gly Cys Cys Lea Cys Tyr Pro Asn 290 20145 104 11 25 =.11 DNA Coll Artificial 12011 721 Artificial Sequence 1-25 7.24 Synthetic construct. 0(40)0 104 at atchatt coaccutgft stggc 25 1110 1.5  $\{ \mathbb{N} \mid \Omega_{\mathbb{R}} \}$ (M. 1) Artificial Sequence 077.0 1-25 1. Synthetic construct. G (0) - 1.15 - maragadigo tocatgatga tytoc 25 12104 126 <2110.50 SULLEY DNA U13 Artificial 1): 7.1 Artificial Sequence
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- +213→ Homo sapiens
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- Leu Gly Pro Lys Val IIe Lys Glu Lys Lea Thr Gln Glu Leu Lys 35 40 40
- Asp His Asn Ala Thr Ser He Leu Gln Glt Leu Pro Leu Leu Ser 50 55
- Ala Met Arg Glu Lys Pro Ala Gly Gly IIe Pro Val Leu Gly Ser 65  $^{\circ}$
- Leu Val Asn Thr Val Leu Lys His Ile Ile Trp Leu Lys Val Ile 85  $^{\circ}$
- Thr Ala Asn The Leu Gln Leu Gln Val Lyr Pro Ser Ala Asn Asp  $\frac{35}{100}$
- Gln Glu Leu Leu Val Lys Ile Pro Leu Asp Met Val Ala Gly Phe 110 115
- Asn Thr Pro Leu Val Lys Thr Ile Val Glu Phe His Met Thr Thr 135 130 130
- Glu Ala Gl<br/>n Ala Thr Ile Arg Met Asp Thr Ser Ala Ser Gly Pro\$140\$ <br/> \$140\$
- Thr Arg Leu Val Leu Ser Asp Cys Ala Thr Ser His Gly Ser Leu 155 160 165
- Arg The Cln Leu Leu Tyr Lys Leu Ser Fhe Leu Val Asn Ala Leu 170 175
- Ala lys Gln Val Met Asn Leu Leu Val Fre Ser Leu Fre Asn Leu 185 190 195
- Val Lys Ash Gln Leu Cys Fro Val Ile Glu Ala Cer Fhe Ash Gly 200 200
- Mot Tyr Ala Asp 160 hou 'Ohn Leu Val Lys Val Ero Ile Jer Leu 21' 221

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Gin	Gly	Lys	Val	Thr 200	Lys	Trp	Phe	Asn	Asn 265	Spr	Ala	Ala	Ser	5-0 370
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Gla	Asp	Vil	Val	liga Zan	Ala	Ala	Val	Бlа	Ala 295	Val	Leu	Ser	Pro	G1u 300
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Fre	Glu	Fhe	Fhe	21e 3 0	Asp	Gln	Gly	His	Ala 355	Lys	Val	Alá	Gln	Lea Soot
Ile	Val	Leu	Glu	V 11 305	Fhe	Fro	Ser	Ser	31u 370	Ala	Leu	Arg	Pro	Leu 375
Fhe	Thr	Leu	Gly	11e 380	Glu	Ala	Ser	Ser	31n 385	Ala	Gln	Phe	Туг	73. r 3.40
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Asp	Ala	Leu	Val	Leu 470	Thr	Irc	Alā	Ser	Leu 475	Trp	Lys	Pro	Ser	Ser 480

Iro Val Ser Glo

<sup>+210 + 129</sup> +211 × 2212 +212 + INA +213 + Home Marien.

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 The Ard Ard Lou Val Lys Ala Fro Fro Ard Ash Tyr Ser Val Ile
Val Met Phe Thr Ala 14u Gln Leu His Ard Gln Cys Val Val
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Tyr Dir Jer Ala the Thr Amn Ard IVe the the Ala Met Val Arg
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Ala Ir. Thr the Ile Ash the Erc Ala Lys Gly Lys Erc Lys Ara
Gly Asp Thr Tyr Glu Leu Gln Val Ard Gly Phe Ser Ala Glu Gln
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The Arm Fro Err Ash Tyr Ala Gly Fro Lou Met Leu Gly Leu Lou
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Leu Ala Val Ile Gly Gly Leu Val Tyr Leu Arg Arg Ser Ash Met
Glu The Leu Fhe Asn Lys Thr Gly Trp Ala Phe Ala Ala Leu Cys
The Val Leu Ala Met Thr Ser Gly Gln Met Trp Asn His Ile Arg
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Gly Fro Ero Tyr Ala His Tys Ash Pro His Thr Gly His Val Ain
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Tyr lle His Gly Ser Ser Gln Ala Gln Phe Val Ala Glu Thr His
Ile Val Leu Leu Phe Asn Gly Gly Val Thr Leu Gly Met Val Leu
Leu Cys Glu Ala Ala Thr Ser Asp Met Asp Ile Gly Lys Arg Lys
Ile Met Cys Val Ala Gly Ile Gly Ieu Val Val Leu Phe Phe Ser
                305
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Ser The Leu Met Ser
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Les Thr Fhe Hig Fro Gly Ser Gln Val Val Lym Leu Fr The Ile 50 55

As the Met Lys The Arg Gly Thr Der Ele Le. As A.: Tyr The  $e^{i\phi}$ 

Ach Sering I.e. Dys Typ In Ger Ard Ala Ala Met Dry Ser Gly led The Thr His led Thr Blu Ser Drp Ash Ash The Lys Bly Let. Asp Fro Ash Tyr Thr Thr Trp Met Asp Val Met Glu Arg His Gly 11". Tyr Ara Thr Gln Lys Phe Gly Lys Lou Asp Tyr Thr Ser Gly His His Ser Ile Ser Asn Arg Val Glu Ala Trp Thr Arg Asp Val Ala Phe Leu Leu Ard Gln Glu Gly Arg Pro Met Vai Ash Leu Ile Arg Ash Ara Thr Lys Val Arg Val Met Glu Arg Asp Trp Gln Ash Thr Asp Lys Ala Val Asm Trp Leu Arg Lys Glu Ala Ile Asm Tyr Thr Glu Pro Phe Val Ile Tyr Leu Gly Leu Arn Leu Fro His Pro Tyr Fro Ser Era Ser Ser Oly Glu Ash Phe Gry Ser Ser Thr Phe Hig Thr Ser Leu Tyr Trp Leu Glu Lys Val Air His Asp Ala Ile Lys The Pro Lys Trp Ser Pro Leu Ser Glu Mot His Pro Val Asp Tyr 1945 .55 Tyr Ser Ser Tyr Thr Lys Asn Cys Thr Gry Arg Phe Thr Lys Lys Glu Ile Lys Asn Ile Ard Ala Phe Tyr Tyr Ala Met Cys Ala Glu Thr Asp Ala Met Lou Gly Glu Ile Ile Leu Ala Leu His Gln Leu Asp Leu Leu Gln Lys Thr Ile Val Ile Tyr Ser Ser Asp His Gly Clu Leu Ala Met Clu His Arg Gln Ehe Tyr Lys Met Ser Met Tyr Glu Ala Ser Ala His Val Iro Leu Leu Met Met Gly Fro Gly Le 340 Lys Ala Sly 100 (In Val Sor Ash Val Val Der Lon Val Asp Tie Tyr Arc Thr Met Ion Asp ile Ala Gly Ile Fra Leu Ar. "Elm Asm

Lou Ser Sly Tyr Ser Lou ben Pri Lou der der die Thr File Lys 386 - 251 - 390

Ash Glu His Lys Val Lys Ash Leu His Fr Fre Trp Ile Leu Ser 395 400 400

Glu Fhe His Gly Cys Ash Val Ash Ala Ser Thr Tyr Met Leu Ard 410 41: 420

Thr Asn His Trp Lys Tyr Ile Ala Tyr Ser Asp Gly Ala Ser Ile 425 435

Leu Fro Glin Leu Fho Asp Leu Ser Ser Asp Fro Asp Gliu Leu Thr -44%

Asn Val Ala Val Lys Ph⊖ Pro Glu Ile Thr Tyr Ser Leu Asp Gln 465 465

Lys Leu His Ser Ile Ile Asn Tyr Pro Lys Val Ser Ala Ser Val 470 480

His Gln Tyr Asn Lys Glu Gln Phe Ile Lys Trp Lys Gln Ser Ile 485 -490 -495

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lle Thr Gln Cys Asp Ile Tyr Ser Thr Leu Leu Gly Leu In: Ala 65

Asp Ile Glm Ala Ala Glm Ala Met Met Val Thr Ser Ser Ala Ile 80 85 40

Cor Ser Leu Ala Cys Ile Ile Ser Val Val Gly Met Ard Cys Thi 35 100 105

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Gly Gly Val Phe Fne Ile Leu Gly Gly Leu Leu Gly Phe Ile Fto 125 130

Val Ala Trp Asn Lou His Gly Ile Leu Arg Asp Fhe Tyr Ser Pro 140 145 150

Leu Val Pro Asp Ser Met Lys Phe Glu Ile Gly Glu Ala Leu Tyr 165 160

Leu Gly Ile Ile Ser Ser Leu Fhe Ser Leu Ile Ala Gly Ile Ile 110 \$170\$

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- Ash Pro Leu Glu Gin Cys Cys Tyr Ash Asp Ala Ile Val Ser Leu 60
- Ser Glu Thr Arg Gln Cys Gly Pro Pro Cys Thr Phe Trp Pro Cys 65
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Lys Phe Tyr Asp Fro Leu Gln His Cys Cys Tyr Asp Asp Ala Val $50^{\circ}$   $-55^{\circ}$  60

Val Pro Leu Ala Arg Thr Gln Thr Cys Gly Asn Cys Thr Fhe Arg  $6\,\%$  -70 -75

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<213 - Hom- sarious</pre>

4410 - 133

วิดีตรีตับไม่นั้น จึงปราหะสังสาเล้าจริงกรีตันน หรือรู้ของแลงสู ลียลัยมาสูกมา ผูกก gotograpio agricupggu igottopoog ogooggenjo gtorogoddy 16(r ctopocagea chaqaagito ototgogogt pogalogqoga Unitgggoqto 15 m eobaeggebe tygaggergg bagetyjege tyggggatuee tyctottoge 200 totottootg gotgugtroo taggtooggt ggcaqcotto aaggtogoda //%// ogoogtatto butgtatgto tgtbongagg ggbayaabyt babbottoabb $A\Phi^{*}$ tgcaggotot teggoodigt ygacaaaggg cacgatgtea cottotacaa 👭 🖰 gabytyytao hydaystoga ygygogayyt ybayachtyb teagaybybb 400ggoodatoog maashtoang tibbaaggans tibbabotgoa bhaiggaggo 4%%caccaygoty ocaacabray ocabgacoty gotoagogro abyggotigga b(U). gtoggooton gapoapoaty graapthoto datoachatg ogdaadotga (50). cootgotgya tagoygooto tantgotgon tygtggtgga gathaggean  $\hat{\mathbf{b}}^{(0)}$ cappactogg agparagggt coatggtgco atggagotgc aggtgcagad 66% aggeaaagat geachatoea actytytytyt ytaeesatee teetoeeagg  $^{*}(+$ atagtgaaaa wat sacggot goaqoostgg otacydytgo otgcarogra $^{10}\mathrm{eV}$ ygaatootot goothoooot barootgoto biggrotada agdaaaggda 8000 ggoaqonton aaccgoogtig obcagqaget ggitgoggatig gacagbaaca 8%%ttcaagggat tqaaaaccoo qgotttqaag ootcaccacc tgoocagggg чог ataccogagg ccaaaagtcag gcaccocctg toctatgtgg cccagoggca 950 goottorgag torgggogge aretgettte ggagereage acceptett  $1000\,$ efectionagg ecoeggagae gfeltettee categorgga coefgteest 1000 gactotocaa acttigaggi catotagooc agotggggga cagigggcig 1100 ttgtgyctgg gtotggggca ggtgeatttg agocagggct ggctotgtga 11°0 gtggddiost tagaerogga estggttosa todateatga totgggdtoa 1900gatactotga datencagaa geogragheed teaacceete togatgetan 12%atggagatg: typacggctc agreectgtt ccaaggattt tggggtgotg 1300 agattotoch oragajaect qaaattoaco agetacaqat gocaaatgae 1350. ttadatotta adaaqiotek daargtobaq boottbaqoa wototegtti 1490tigagasatga unotti ggraf lotu galarat madtiggara lagatiggaran 1450.

## 4.400 - 140

Met Gly Val Pro Thr Ala Leu Gh. Ala Gly Ser Trp Arg Trp Gly 1 5 10

Ser Leu Leu Phe Ala Leu Phe Leu Ala Ala Ser Leu Gly Fro Val 25 30

Ala Ala Phe Lys Val Ala Thr Pro Tyr Ser Leu Tyr Val Cys Pro 35 40 45

Glu Gly Gln Asn Val Thr Leu Thr Cys Arg Leu Leu Gly Pro Val  $^{60}$ 

Asp Lys Gly His App Val Thr Phe Tyr Lys Thr Trp Tyr Arg Ser -65

Ser Arg Gly Glu Val Gln Thr Cys Ser Glu Arg Arg Pro Ile Arg 80 85 40

Ash Leu Thr Phe G.n Asp Leu His Leu His His Gly Gly His Gln 95 100 105

Ala Ala Asr Thr Ser His Asp Lou Ala Gln Arg His Gly Leu Gru 110 115

Cor Ala Ser Asp His His Gly Asn Fhe Skr lle Thr Met Ard Asn

led Thr Lew Lew Asp Cer Gly Lew Tyr Cys Tys Lew Val Val Glu

<sup>-310 - 140</sup> 

<sup>.:211 - 311</sup> 

 $<sup>&</sup>lt;\!\!112*-FRT$ 

<sup>4...13 -</sup> Homo sapiens

				147					145					15
Ho	ĀĽJ	His	His	His 155	Ser	Gl:i	His	Arj	Val 160	His	Gly	A.a	Met	31u 16'
Leu	Gli.	Va1	Gln	Thr 170	Gly	Lys	Asp	Ala	F±0 175	Ser	Asn	Cys	Val	Val 180
Tyr	Pro	Ser	Ser	Ser 185	Glr.	Asp	Ser	Glu	Asn 190	Ile	Thr	Ala	Ala	Ala 195
L⊕u	Ala	Thr	Gly	Ala .10		Ile	V.a.1		11e 205		Суз	Leu	Pro	Leu 210
Ile	Leu	Leu	Leu	Val .15	Туг	Lys	Gln	Arg	Gin L.o	Ala	Ala	Ser	Asn	Arg 125
Arg	Ala	Gln	Glu	Leu J30	Val	Arg	Met	Asp	t err , →5	Asn	Ile	Gln	Gly	11e .'40
G10	Asn	Pro	Gly	Phe 145	Glu	Ala	Ser	Pro	Pro , 50	Ala	Gln	Gly	Ile	Fro 155
G10	Ala	Lys	Val	Arg .160	His	Pro	Leu	Ser	Tyr	Val	Ala	Gln	Arg	Gln 279
Pro	Ser	Glu	Ser	131 y		Hi =	Leu	Leu	.er . អ0		Pro	Ser	Thr	Pro . 85

Let Ser Pro Pro Gly Pro Gly Asp Val Pho Phe Pro Ser Leu Asp .90  $^{\circ}$  .95  $^{\circ}$ 

Pro Val Pro Asp Jer Pro Ash Phe Glu Val Ile

<.310 > 141

· 211 · 1732

<1212 - DNA

<400-141

4213 + Homo sapienr

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cattaccete aaaaaaaaaa aaaaaaaaaa aa 1732
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<sup>&</sup>lt;310 > 142

<sup>&</sup>lt;211 - 451

<sup>+2122</sup> FPT

<sup>&</sup>lt;113 > Hurr sapiens

<sup>+475+142</sup> 

- Val 11: 41m Val Ary Val Len Ser Ser Len Len Sly Lan Ala Leu Leu Trp The Fr Leu Asp Fer His Ala Ary Ala Arg Frc Asp Met Phe Cys Leu Phe His Gly Lys Arg Tyr Ser Pro Gly Glu Ser Trp His Pro Tyr Lon Glu Pro Gln Gly Leu Met Tyr Cys Leu Arg Cys Thr Cys Ser Glu Gly Ala His Val Ser Cys Tyr Arg Leu His Cys Pro Pro Val His Cys Pro 3ln Pro Val Thr Gln Pro Gln Gln Cys Cys Pro Lys Cys Val Glu Pro His Thr Pro Ser Gly Leu Arg Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His Gly Gli Ile Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro Ash Glr Cys Val Lou Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys 140 140 Gly Let Thr Thr Cys Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro Leu Pro Asp Ser Cys Cys Gl<br/>n Ala Cys Lys Asp Glu Ala Ser Glu 170  $$175\$ Glm Ser Asp Glu Glu Asp Ser Val Glm Jer Let His Gly Val Arg His Pro Gln Asp Pro Cys Ser Ser Asp A:a Gly Arg Lys Arg Gly 100 Pro Gly Thr Pro Ala Pro Thr Gly Leu Ser Ala Pro Leu Ser The Ile Pro Arg His Phe Arg Pro Lys Gly Ala Gly Ser Thr Thr Val  $\mathcal{L} \times \mathcal{O}$ Lyc Ile Val Leu Lys Glu Lys His Lys Lys Ala Cys Val His Gly .45 -250Cly Lys Thr Tyr Mer His Gly Glu Val T:p His Pro Ala Phe Arg Ala Fhe Gly Fro Leu Pro Cys Ile Leu Cys Thr Cys Glu Asp Gly Arroln Asp Tys Gir Arr Wal Thr Cys Fr; Thr Glo Tyr Erc Tys

Live Fig. 30 th Fig. Bis Fro Clu Lys Val Ala Gly Lys Cys Cys Lys Ile Cys Fro

Arg His Fro Glu Lys Val Ala Gly Lys Cys Cys Lys Ile Cys Fro 305 310

Cys Pro Lys Ala Pro Gly Arg Val Lou Val His Thr Ser Val Ser 335 340 345

Fro Ser Pro Asp Asn Lou Arg Arg Phe Ala Leu Glu His Glu Ala 350 360 360

Ger Asp Leu Val Glu He Tyr Leu Trp Lys Leu Val Lys Asp Glu 36% 370 375

Glu Thr Glu Ala Gl<br/>n Arg Gly Glu Val Pro Gly Pro Arg Pro His $380 \,$   $365 \,$  300

Ger Glin Asin Leu Pro Leu Asp Ser Asp Glin Gliu Ser Glin Gliu Ala 5.45 400 405

Arg Leu Pro Glu Arg Gly Thr Ala Leu Pro Thr Ala Arg Trp Pro 410 410 410

iro Ard Arg Ser Lou Glu Arg Leu Pro Ser Pro Asp Pro Gly Ala 405 430 430

Glu Gly His Gly Gli Ser Arg Gln Ser Asp Gln Asp Ile Thr Lys 440 445

Thr

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- · / 11 93
- · A.. · FRT
- w/l: Homo sapirns
- 112 144
- Met Asp Ser Leu Arg Lys Met Leu Ile Ser Val Ala Met Leu Gly  $\frac{1}{10}$
- Ala Gly Ala Gly Val Gly Tyr Ala Leu Leu Val Ile Val Thr Pro 20 25 30
- 31y Gla Arg Arg Lys Gln Glu Met Leu Lys Glu Met Pro Leu Gln 85 40 40
- Asp Pro Ard Ser Ard Glu Glu Ala Ala Ard Thr Gln Gln Leu Leu 50 55
- Leu Ala Thr Leu Gin Glu Ala Ala Thr Thr Gin Glu Asn Val Aza 65 76
- Trp Arg Lys Asn Trp Met Val Gly Gly Glu Gly Gly Ala Ser Giy

Arg Ser Pro

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- <.13> Homo saplens
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atahogtgyo titottiatt tigoteodan geeheeligga agabetggin 800).
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Baccqaacaq tgqtggacaq otcaqtatto ocascagagg ggotgatooc 900
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aaggfottig ggotgtotat godacooggg aggatgaday yeastigigi 1000
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Fig. Gly Ari Fr. Gly Gly Gly Glu Met Glu Asn Thr Leu Gln

- a similar Ala Ala Alu Aly Leu De Br. Fr. Tyr Bly Leu Thr Ala  $\mathbb{R}^{n}$
- W: The Tyr ile Asp Lew Val Ala Asp Glu Vin Gly Leu Trp Ala 275 - 286
- Tyr Afa Thr Arg Glu Asp Asp Arg His Leu Cys Leu Ala Lys 290 245 300
- Let Asp Fro Sin Thr Leu Asp Thr Siu Gln Gln Trp Asp Thr Fro 305 310 310
- Frc Arg Glu Asn Ala Glu Ala Ala Phe Val Ile Cys Gly Thr 320
   325
- $+\infty$  Tyr Val Val Tyr Asn Thr Arg Pro Ala Ser Arg Ala Arg Ile 335 \$340
- Glu Cys Ser Fhe Asp Ala Ser Gly Thr Leu Thr Fro Glu Arg Ala 350 355 360
- Ala Leu Pro Tyr Phe I'ro Arg Arg Tyr Gly Ala His Ala Ser Leu 365 370 375
- Ard Tyr Ash Pro Arg Glu Arg Gln Leu Tyr Ala Trp Asp Asp Gly 380 385
- Tyr Gln Ile Val Tyr Lys Leu Glu Met Arg Lys Lys Glu Glu Glu 395 405

Val

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- <.11 2052
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- ≈13> Homo sapiens
- 4100 147
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m T}$ 200 037 rittpicott isopiscella pachasosop kocinapach colipiitiste atgiggadāt otototuaso utosaamama acmongugag satateotut HOO. rocatuoggo algotvatot gagoogagad ytggaatoca gggtacagat 850. aggagataen tittingage otatalogik geaestyget acsaaagtas 900 foogaatact ofgotgiguo otatiitiin meattattaa aetgaawatt 950 ttottotona wattoowgtg gaawatoowg gojgaactgg мерадамжан 1000 aaagciegga caggoagaat tgagagaege ooggaaacac goagtggagy 1950 tgactetgga tecugagaeg geteaceega agetetgegt ttetgatetg 1100 aasactqtaa cccataqaaa agotooccaq qagqtqooto actotgagaa 1150 magatttaca aggaagagtg tggtggcttc tcagagtttc caagcaggga 120) aacattachi ggaggtugah ggagganana ataaaaqgtg gogngtggga 1250. dtgtgccggg atgatgtgga cagyagqaag gagtacgtga ctttgtctcc 130) cgatcatggq tactgggtcc tcagactgaa tggagaacat ttgtatttca 1350 cattabateč eegitttate agegieties eraggaegee aestacaaaa 1400 atagyggtot thotggacta thagtgtggg accatetoot tetteaacat 1450 amatgaccag tocottattt ataccotgae atgtoggttt gamggottat 1500 tgaggocota battgagtat cogtoctata atgagoaaaa tggaactobo 1950 atagteatet geoloagteac ecaggaatea garaaagagg cetettggea 1600 aagggeste: geaateseag agacaageaa cagtgagtes testeacagg 1650 caaccacgoo offnotocoo augggtqaaa tutaggatga atdacatcoo 1700acattettet ttagggatat taaggtetet etendagate caaagtedeg 1750. magnaguego chaaggigge timagaig addggdasid geoigieae 1890. atguna itoa qutqtbatyg otghibtua'i otiqqaqiga agaaqqhiga 1856. pattamatth autttamtot mann hatch ga haagtau tottamaana 1900 manin dica gotgaasaan ogi hasgaat itimat diba baso doroo 1965.

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- Met Ala Leu Met Leu Ser Leu Val Leu Ser Leu Leu Lys Leu Gly 10 15
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- Thr Asn Ala Glu Ala Met Glu Val Arq Fhe Fhe Arg Gly Gln Fhe 50 00
- Fer Ser Val Val Hiß Leu Tyr Arg Asp Gly Lys Asp Gln Pro Pher 65 70 75
- Met Gln Met Pre Gln Tyr Gln Gly Arg Tar Lys Leu Val Lys Asp
- Ser Ile Ala Glu Gay Arg Ile Ser Leu Arg Leu Glu Asn Ile Thr 95 100 106
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- Tyr Tyr Gln Lys Ala Ile Trp Glu Leu Gln Val Ser Ala Leu Gly 125 130
- Ser Val Pro Leu Ile Ser Ile Thr Gly Tyr Val Asp Arg Asp Ile 140 145 150
- Gln Leu Cys Gln Ser Ser Gly Trp Phe Pro Arg Pro Thr Ala 155 160 165
- Lys Trp Lys Gly Pro Gln Gly Gln Asp Leu Ser Thr Asp Ser Arg
- Thr Asn Arg Asp Met His Gly Leu Fhe Asp Val Glu Ile Ser Leu 185 190 195
- Thr Val Gin Glu Asn Ala Gly Ser He Ser Cys Ser Met Arg His
- All: His Leu Ser Arg Glu Val Glo Mer Arg Val Glo Ile Gly Asp
- The line line Glu Fro Ille Ser Trp His less Ala Thr Lys Wal Leu

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1 -	Arg	Arg	Lys	Hi: 275	Gly	31n	Ala	Glu	Leu 330	Arg	Asp	Ala	Arq	Lys 295
12.	Ala	Val	Glu	Val Zgu	Thr	Leu	Asp	Fro	31u 239	Thr	Ala	His	Fro	Lys 300
Leu	Cys	Val	Ser	Asp	Leu	Lys	Thr	Val	Phr 310	His	Arj	Lys	Ala	Pro 315
Gli.	Glu	Val	Pro	E 11 3.50	Sor	Glu	Lys	Arg	Phe 325	Thr	Arq	Lys	Ser	V a 1 3 3 Q
Val	Ala	Ser	Gln	2001 335	Phe	Gln	Ala	Gly	Lys 340	His	Tyr	Trp	Glu	Val 345
Asp	Gly	Gly	His	AUII Brito	Lys	Arg	Trp	Arg	Val 355	Gly	Val	Суѕ	Arg	Азр 360
Asp	Val	Asp	Arg	Arg 305	Lys	Glu	Tyr	Val	Thr 370	Leu	Ser	Fro	Asp	H:s
Gly	Туг	Trp	Val	I.⊷u B⊶O	Arg	Leu	Asn	Gly	310 385	His	Leu	Туr	Fhe	Thir 330
Leu	Asn	Pro	Arg	Flier 3 •5	Ile	Ser	Val	Phe	Pro 400	Arg	Thr	Pro	Pro	Thr 405
Lys	Ile	Gly	Val	Fh.e- 410	Leu	Asp	Tyr	Glu	Cys 415	Gly	Thr	Ile	Ser	Ph∈ 4.:0
Phe	Asn	He	Asn	A: pr 41.5	Gln	Ser	Leu	Ile	Tyr 430	Thr	Leu	Thr	Cys	Arg 4 45
Fhe	Glu	Glγ	Leu	Le-u 4-; 0	Arg	Fro	Tyr	Ile	Glu 445	Tyr	Pro	Ser	Tyr	Asn 450
Glu	Gln	Asrı	Gly	Thr 455	Pro	Il€	Val	Ile	Cys 460	Fro	Val	Thr	Gln	G15 465
Cer	Glu	Lys	Glu	Ala 470	Ser	Trr	Gln	Arg	Ala 475	SAT	Āli	110	Fre	ร; น 4۶0
Thr	Cer	Ash	Ser	Glu 485	Ser	Ser	Ser	Gln	Ala 490	Thr	Thr	Pro	Fhe	heu 495
Fro	Arg	Gly	Glu	Met 500										
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1221> Artificial Sequence
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HL10 - 152
+11.11 + 2.04
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-1117 - Homo sapiens
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 nt padaggas coogacadda gatatoddaa gaaynagada qaydagagto 670.
ethocomacon canotyceae ogayynooco tottegocto otomagaytu 100
tytatytääe työtotytyy ttyysäyset yaatytyäät eyotyssäoo 750-
inaccacagy deagtgtgag tgtbiqbbag gttateaggg getteactgt 8 M
quaacotgoa aagagggott ttacotaaat tacacttetg ggetotgtea 800
godatytgae tytaytocae atggagetet bageataeeg tyeaabaggt 900
aagbaacaga yggtyqaabt gaaytttatt ttattttago aagggaaaaa 950-
haaaaggotgo taototoaag gaocatacty gtttaaacaa aggaggatga 1900
gggtcataga tittacaaaast attifatata cittitatiot citaciittat 1950
atyttatast thatptoagg atttadadac atotadtta otgatttagt 1100
tettoaaaag caotagagti gooaattttt otetgggata atttofgtaa 1170.
atttcatggy asaaaattat tgaagaataa stotgotito tggaagggot 1.00
ttdaggdatg asacctgots ggaggtttag saatgttott atgtttatta 1.50
atataccatt ggagtttgag gaaatitgtt gtttggtta titttstoto 1.00
täätoaaaat totacattig titoittigga catotaaago tiaacotiggg 1:50
ggtacectas titatitaac tagiggiaag tagaciggit itacictati 1400-
faccagtaca tittigagac caaaaqtaga tiaagcagga attatettia 1450
aactattat; ttatttggag gtaatttaat ctagtggaat aatgtactgt 1:00
tatotäagoa tittgoottgi actgoactga aagtaattat tottigacot 1550
tatgthagge acttogettt tigtugacce caagicaaaa aactgaagag 1600
acagtattaa ataatquaaa aaataatgac aggthatact cagtgtaacc 1650
tuggtataac ccaaqatetq etgecaetta egagetgtqt teettqqqea 1790
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10105 153

211 = 258

212> FET

<213 - Homo sapiens</pre>

## <400> 153

- Met Arg Ser Leu Pro Ser Leu Gly Gly Leu Ala Leu Leu Cys Cys 1  $\stackrel{\leftarrow}{}$  15
- Ala Ala Ala Ala Ala Val Ala Ser Ala Ala Ser Ala Gly Asn 20 25
- Va? Thr Gly Gly Gly Ala Ala Gly Gln Val Asp Ala Ser Fro 35 40 40
- Gly Pro Gly Leu Arg Gly Glu Pro Ser His Pro Phe Pro Arg Ala -50 -60
- Thr Ala Fro Thr Ala Gln Ala Fro Arg Thr Gly Pro Fro Arg Ala 6! 70 75
- Thr Val His Arg Pro Leu Ala Ala Thr Ser Pro Ala Gin Ser Fro 80 85 90
- Glu Thr Thr Pro Leu Trp Ala Thr Ala Gly Pro Ser Ser Thr Thr 95 100 105
- Phe Gln Ala Pro Leu Gly Pro Ser Pro Thr Thr Pro Pro Ala Ala 110 115- 120
- Glu Arg Thr Ser Thr Thr Ser Gln Ala Ero Thr Arg Pro Ala Ero 125 130 136
- The The Lew Ser The The The Gly Fro Ala Fro The The Fre Val 140 145
- Ala Thr Thr Val Fro Ala Fro Thr Thr Fro Ard Thr Fro Thr Fro 169
- Aug lei Ert Ger Cer Cer Ast Cer Ser Val Leu Ert Thr Ert Er

Cas Ser Val Val Gly Ser Leu Asr. Val Asn Arg Cys Asn Gli Thi 0.00 205

Ibr Gly Gln Cys Glu Cys Arg Fro Gly Tyr Gln Gly Leu His Cys

Cla Thr Cys Lys Glu Gly Fhe Tyr Leu Asn Tyr Thr Ser Gly Leu

CVs Glm Pro Cys Asp Cys Ser Pro His Gly Ala Leu Ser Ile Pro

123 Ash Arg

1210 - 154

 $\cdots 111 + 14$ 

COL DNA

4.13 Artificial

4, 26

%...1 · Artificial Sequence
%...1 · 24
%...3 · Cynthetic construct.

1100 154

: estgetetg tggttggaag betg 24

155

·. 11 24 ·.. 1. · INA

- li Artificial

-5.1 Artificial Sequence

1-24

333 Synthetic construct.

3400 + 155

Significating gotgadagad obac 24

c.::0 156

4.11 38

SOLL DNA

+.1% Artificial

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<!!!!! Artificial Sequence</pre>

<1.11 > 1-38

+223 / Synthetic construct.

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1310 - 152
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0311- 653

=.:13> DNA

113 Homo sapiens

<400 - 157

igrigogoaq tqtaqacetq qqaqqatqqq eggeetqetq etqqetqett 50
ttotigettt gqteteggtq eccagggeec aggeegtqtq qttqqqaaqa 100
otigacectq ageaqettet tqqqeectqq taeqtqettq eggtqqeete 150
coggaaaaq qqetttqeea tqqaqaaqa catqaaqaac qteqtqqqqq 200
tqqqqqtqac ecteacteea qaaaacaace tqqqqaeqet qtenteteaq 250
raeqqqetqq qaqqttqaa ecaqaqqtqto atqqaeqqa taaaqeqaaa 300
ctovqqatqq qtqttqaqa ateceteaat aggeqtqetq qaqetetqqq 350
tqoqqqqaeq ageectteaa caeeqtqqaq etqtacaqqte tqaeqqaqa 400
ttoqqqqaeq ageectteaa caeeqtqqaq etqtacaqqte tqaeqqaqa 450
aqcaqqeeqq qaqqeetqqq qqeecaqqe eaaqtqqqq aggaeetqq 500
qetteetqte acaqtaqaaq qeecaqetqe agaaqqaeet caeetqtqet 550
caeaaqatee ttetqtiqqt getqeqteec eaqtaqqat qqeqeecaca 600
qqqteetqtq aeeteqqeeq qtqteeacee aeeteqqeeq 650

 $e210 \times 158$ 

1.11= 163

- 1.1 PET

<.ll> \* Homo sapiens

<4400: 158

Met Gly Gly Leu Leu Leu Ala Ala Phe Leu Ala Leu Val Ser Val  $1 \ 5 \ 10 \ 15$ 

aggaccagca ccagcthaga ataaagcgat tocahagca 689

Fro Arg Ala Gln Ala Val Trp Leu Gly Arg Leu Asp Pro Glu Gln 25 30

Leu Leu Gly Pro Trp Tyr Val Leu Ala Val Ala Ser Arg Glu Lys 40 40

Gly Phe Ala Met Glu Lys Asp Met Lys Asn Val Val Gly Val Val 50  $^{\circ}$ 

Val Thr Leu Thr Pro Glu Asn Asn Leu Arg Thr Leu Ser Ser Gln 65 75

His Gly Leu Gly Gly Cys Asp Gla Ser Val Met Asp Leu Ile Lys

- Arrash Ser Hy Trp Val Fho Old Ach Pro Cer 114 Hy Val Lei MS 100
- Shu Leu Trp Val Leu Ala Thr Asn Fhe Ary Asp Tyr Ala ile ile 110 120
- The Thr Gln Leu Gl. Fhe Gly Asp Glu Fro Fne Asn Thr Val Glu 125 130 135
- Leu Tyr Ser Leu Thr Glu Thr Ala Ser Glu Glu Ala Met Gly Leu 140 145 150
- The Thr Lys Trp Ser Arg Ser Leu Gly Phe Leu Ser Gln 155
- < 210 > 159
- <.211 1665
- <312 DNA
- <213 Homo sapiens
- <400 159
- ascagacytt bobtogogo obtogoacht otaachebag acatgotoot 50 gotgotgotg coestgotot gggggaggga gagggeggaa ggacagacaa 100 gtaaartgot qabgatqbaq agttboqtga oqqtybaqqa aqqobtqtqt 180 gtobatgtgd spigothott cioctaboen togoatgget quattiacec 200 tggcccagta gttcatggct actggttccy ggaagyggcc autacayacc 250 aggatyotop agtggodada aadaabodag otogggoagt gtgggaggag 300 actogygado gattocapot cottgyggad coacatacea agaattydad 350 octgagoato agagatgoba gaayaagtga tgogggyaya tabttottto 400 gtatggagaa aggaaqtata aaatggaatt ataaacatca coggototot 450 gigaatgiga cayootigad ocadaggood aabatootoa toodaggoad 500 octographic goodgeecc agaatetyae etgetetgtg eeetgggeet 550 gigagoagyg gacabooct aigaictoct ggalagggac clocqiytoc 600 eccetagade detecaceae degetected gtacteaced teateceaea (50) goodcaggad hatggradea gootcacety teaggigade ticeetgygg 70% ccagostgac caogaacaag accetecate teaacetete entacendeet 750 cagaantiga chatganigi ottobaagga gabggcabag tatbuabagi 600 ettgadaaat unsteatite tytpachees agaaggedag tetshoodee 850 tggtotafgq agttgafuna qftganadha atheshrtdo hadqhtdadh 900of dailof gga libanggo of dan lent gt dishop it cadauroot limbadisho qipal PAC

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- <210 160
- <211 463
- <.112 · PET
- <\_13 · Homo sapiens

## < 100 - 160

- Met Leu Leu Leu Leu Pro Leu Leu Trp Gly Arg Glu Arg Ala 1 5 10 15
- Glu Gly Gln Thr Ser Lys Leu Leu Thr Met Gln Ser Ser Val Thr 20 25 30
- Val Glu Glu Gly Leu Cys Val His Val Pro Cys Ser Fhe Ser Tyr 35 45
- Pro Ser His Gly Trp Ile Tyr Fro Gly Pro Val Val His Gly Tyr 50 60
- Trp Phe Arg Glu Gly Ala Asn Thr Asp Gln Asp Ala Pro Val Ala 65 -70 -70
- Thr Asn Asn Erc Ala Arg Ala Val Trp Glu Glu Thr Arg Asp Arg 80 85 95
- Fig. H.s lea Lea Gly Acp Fro His Thr Lys Ash Cys Thr Lea Ser \$100\$
- Ile Arr Ary Ala Ard Ard Cer Ary Ala Gly Arr Tyr the The Arg

				11?					115					1
<u> </u>	:14	Lys	Gly	Ser 1:5	Ile	L'λ'S	Trp	Asrl	Tyr 130	I ,;9	818	His	Мij	Let. 135
∴er	Val	Asn	Val	Tar 140	Ala	Leu	Thr	His	Arg 145	Fro	Asn	Ile	Leu	Ile 150
Fi	317	Thr	Leu	Glu 155	Ser	Gly	dys	Pro	Gln 160	Asn	Leu	Thr	Cys	Ser 165
Vax	Pro	Trp	Ala	Cys 170	Glu	Gln	Gly	Thr	Pip 1";	Ern	Met	Ile	Ser	Trp 130
Il€	Gly	Thr	Ser	Val Idti	Ser	Pro	Leu	Asp	P = 1	Ser	Thr	Thr	Arg	∴r 1 +÷
Ser	Val	Leu	Thr	L→α .: )()	Ile	Pro	Gln	Pro	Glr. 205	Ąsp	His	Gly	Thr	Ser J10
I.eu	Thr	Cys	Gln	V.al (15	Thr	Phe	Fro	Gly	A1a .:20	Ser	Val	Thr	Thr	Augra Lugar
Lys	Thr	Val	His	1.20 230	Asn	Val	Ser	Tyr	Pro 245	Pro	Gln	Asn	Leu	Thr . 40
Met	Thr	Val	Ph€	(31r) 114°	Gly	Asp	Gly	Thr	Val !(	Ser	Thr	Val	Leu	GLy OS
Asn	Gly	Ser	Ser	]++\[i	Ser	Leu	Pro	Glu	617 65	Gln	Ser	Leu	Arg	1.⊢u. 1. ()
Val	Cys	Ala	Val	A-1F)	Ala	Val	Asp	Ser	Asn GEO	Pro	Pro	Ala	Arg	Бе <b>и</b> . 45
Ser	Leu	Ser	Trp	Arg Çağ	Gly	Leu	Thr	Leu	Gys Jus	Pro	Ser	Gln	Pro	Ser 200
Asn	Pro	Gly	Val	5+9 505	Glu	Leu	Pro	Trp	7al 310	His	Leu	Arg	Asp	Ala 415
Ala	Glu	Phe	Thr	Cys 5. C	Arg	Ala	Gln	Asn	Pro 325	Leu	Gly	Ser	Gln	Gln +30
leV	Tyr	Leu	Asn	Val 335	Ser	Leu	Gln	Ser	Lys 340	Ala	Thr	Ser	Gly	Val 345
Thr	Gln	Gly	Val	V:1 + 0	Glÿ	Gly	Ala	Gly	Ala 355	Thr	Ala	Leu	Val	Phe 360
Leu	?er	Εħο	C <b>y</b> s	V::1	Ile	Phe	∵al	Val	Val 370	Arg	Cer	Cys	Arq	Lys 375
Lys	Cor	Ala	Ara	Ira 380	Ala	Ala	Gly	Val	Gly 385	Asp	Thr	Cly	Ile	Giu 340
Alq	ñlā	ASI.	Ala	Vāl 334	Arg	1413	.er	Ala	Ser 4 I	alr.	cly	Fr-	Leu	Thr

- Trp Ala Mu Asp Ser Fr. It. Asp Olm Fr. Fro Fr. Ala
- Ali Arg Ser Ser Val Sly Glu Sly Glu Leu Sln Tyr Ala Ser
- 1. 1 For Fhe 31n Met Val Lys Pro Trp Asp Ser Arg Gly Gln Glu 440

Ala Thr Asp fhr Glu Tyr Ser Glu Ile Lys Ile His Arg

- < 1 161
- ..11 + 739 < 12 + DNA
- .13 · Homo sapiens
- <400> 161
- jabqeebagt gaeetgeega ggteggeage acaqaqetet qgagatgaag 50 accotquited tyggitytead getoggooig geogetyeed tyteeticae 100 hotggangag gaggatatca bagggabotg gtavgtgaag gobatggtgg 150togataayga bittooggag gabaggaggo obaygaaggi gibboobagig 200 laggigacag occigggogg tyggaagity gaagocacyt toaccitcat 250 yaqqqaqqat byqtqcatco aqaaqaaaat ootbatqcqq aaqacqqaqq 300 agontgybak atacagogop tatgggggba ggaagotcat gtacctgcag 350. gagotgodda ggagggadda stadatottt tactgdaaag dodagdadda 400 figggggootg otocacatgg gasagottgt gggtaggaat fotgatacca 450 abogggagge cotggaagaa tittaagaaat tiggtgbagog baagggabto 500. toggaggagg adattitoac godootgoag adgggaagot gogttoboga 550 acadtaquea geocoogggt ofgoacefee agageceade efaccadeag 600 acadaga jod oggaccadot ggacctadob tödayodatg accottodot 650 qetoccance accigación abatabagió citticocco abababababa 700 шанаааннан анаалынана анаанынан лагинан 739
- <.110 > 16.3
- <2211> 170
- <..1.) PRT
- <2.13> H mc sapiens
- <400 > 163
- Mot Lys Thr Lou Fhe Leu Gly Val Thr Leu Gly Iou Ala Ala Ala
- low For the Thr Low Glu Glu Glu Has Hie The Gly Thr Tip Typ

20

In Lys Ala Met Val Val Asp Lys Asp the Err Glu Asp Arg Arg

- ir. Aru Lys Val Ser Pro Val Lys Val Thr Ala Leu Gly Gly Gly  $\varepsilon_{i,0}$
- lys Leu Glu Ala Per Phe Thr Fhe Met Arg Glu Asp Arg Cys lle
- Sin Lys Lys Ile Leu Met Arg Lys Thr Glu Glu Pro Gly Lys Tyr ~ ()
- Ser Ala Tyr Gly Bly Arg Lys Leu Met Tyr Leu Gln Glu Leu Fro 100
- Arj Arj Asp His Tyr Ile Phe Tyr Cys Lys Asp Gln His His Gly 110 115
- Gly Leu Leu His Met Gly Lys Leu Val Gly Arg Asn Ser Asp Thr
- Ash Ari Glu Ala Leu Glu Glu Phe Lys Lys Leu Val Gln Arg Lys 110
- Gly Lei Ser Glu Glu Asp Ile Phe Thr Pro Leu Gln Thr Gly Ser 160

C73 Val Pro Glu His

K210 → 163

42111 22

AUG - 1919 PMA

713 · Artificial

1. 2000

- ...... Art: ficial Sequence
- . 2.25 2-22
- \*1.13 Synthetic construct.

-1400) 163

Hydrathaag accetyttee ty 22

 $\pm 0.10 - 1 \pm 4$ 

1.11. 26

C. I. DNA

Pull to Artificial

4. O.

- Synthetic construct.

+400 - 164

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1 € 5
       2 1
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 .l. Artificial
× 220%
7-71° Artificial Sequence
E...125 1-01
 . 👉 Synthetic construct.
 \pm .0 \cdot 155
  ro torqua aagtoottat o 21
1.10 - 1-6
< 211 - 25
COLOR DNA
COLOR Artificial
11.1.1.1
 T. I Artificial Sequence
1-25
\mathbb{R}^3 Synthetic construct.
<400 + 156
 in ragigati egggaacgca gotto 25
-110 - 157
. 1. INIA
 .15 Artificial
(x,y) \in \mathcal{C}_{k}(X)
....l · Artificial Sequence
1.... 1-50
1...3 Synthetic construct.
 400 - 1.7
 ranagarotg gtacgtgaag gocatggtgg togataagga otttooggag 50
 .110 168
 . 11 45
AIG LLL:
Full Artificial
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· ... 1 · Artificial Sequence
200 - Synthetic construct.
 4005 168
 whitechica cootggagga ggaggahate acagggacot ggtad 45
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LII > 1004
7.12 - DNA
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  chargeteat egocoobaga tggetentga cageageeea etgeeteaag 300.
    Troportaba tagittoacot ggygbagdab aadotbobaga aggaggaggg 350.
  statgagnag abbrggadag deabtgagte ettebebbad obeggettea 4/0
   anaacaqoot boocaacaaa gabcabhgha atgabatbat gotggtgaag 450^\circ
   atggratings dagtotocat basetggget ytgegaeese teascotote 500
   itcapgotigt gloaptgotig goaccagoty potbattico ggotiggggoa (6-)
  readglocag cooccagita ogostgosto adapotigog atgogosaad NUL
  atrandatba tigagbadba gaagigtigag aabgobiabb boggbaabat 650.
  cacagación atggtgtgtg ocagogtgca ggaagggggc aaggactoot 700.
  guraggytja otonggggyn ontotygtot gtaabbagto tottbaagge 🗁 🕕
  attatotoot ggggcoagga tobytgtgog atoaboogaa agbotggtgt 800
   ntacaogada gtotgoddat atgtggabtg gatocaggag abgatgaaga PhD.
  icaattagad tygacccase baccabagod batcabecto batttobabt 900.
  tgjtgtttgg ttootgttma stotgttaat aagaaacost aagopaagac 🤲
  ictoracyaa gattotttyy gootoorgya oracaggaga tyotytoact 1000
  taataardaa ootggggtto gaaatdagtg agaddtggat tcaaattdtg 1050-
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 пала 1204
<.:10 - 170
1112 250
1212 + FRT
-213 Hrmc sapiens
*410°= 170
 Mot Ard Ive led the led the Led Led Ala Led Ala Throis
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ly My sha The Ard The Fle Lys Gly Phe Glu Cyc Lys Fr.
 The Mar Win Fry Try Gin Ala Ala Leu Ine Glu Lys Thr Ard Leu
 1-0 Cuz stry Ala Thr Leu Ile Ala Fro Arg Trp Leu Leu Thr Ala
 And his Cys Leu Lys Pro Ard Tyr Ile Val His Leu Gly Gln His
 and leu Gl. Lys alu Glu Gly Cys Glu Glm Thr Arg Thr Ala Thr
 HI. Ser the Pro His Fr. Gly Phe Ash Ash Ser Leu Pro Ash Lys
 Asp His Arg Asn Asp Ile Met Leu Val Lys Met Ala Ser Pro Val
                 110
                                     115
 der lie Thr Trp Ala Val Arg Pro Leu Thr Leu Ser Ser Arg Cys
                                     130
 Val Thr Ala Gly Thr Sor Cys Leu Ile Ser Gly Trp Gly Ser Thr
                 140
 Ber Ser Pro Gln Leu Arg Leu Pro His Thr Leu Arg Cys Ala Art.
                 155
                                     Table
 The Thr Ile Ile Glu His Gln Lys Cys Glu Asn Ala Tyr Pro Gly
 Asn Ile Thr Asp Thr Met Val Cys Ala Sor Val Gln Glu Gly Gly
 Lys Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Agn
 Gln Ser Leu Gln Gly Ile Ile Ser Trp Gly Gln Asp Pro Cys Aia
 The Thr Arg Lys Pro Gly Val Tyr Thr Lys Val Cys Lys Tyr Val
 Asp Trp Ile Gln Glu Thr Met Lys Asn Asn
                4 4
< k10. 171
1211 - 25
riilizə DNA
*113 · Artificial
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1:21.

· /2/ · \* -2/\*

+2z1 Artificial Enquence

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 11. 172
11. 24
11. ENA
  ..!: Artificial
Tic
+ MMl> Artificial Sequence
+ MMl> 1-24
203 Synthetic construct.
 # NO 172
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×210 173
S.:11 18
<.11.> \texttt{DNA}
· .::3 Artificial
× ...
7.1 Artificial Sequence
FMBT Synthetic construct.
<4 mil 173
 · Hitagist gtaascag 18
*. 1:1 174
c.ii 24
cdid DNA
cdid Artificial
c. 1: Artificial Sequence
c.... 1-24
c.25: Synthetic construct.
- 100 F 17.
totataatat tgacqygata ggag 24
<. 10> 175
·.110 25
1212 DNA
<2137 Artificial
. . : 0 .
'C'21* Artificial Sequence
1722 1-25
-213 - Synthetic Trust Post.
.417.275
 Tititalina ocaggittic gugtu zi
10 - 10 f
- 11 - 15 A
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· Artifical
      Artificial Jequency
       1-18
 lus Synthetic construct.
-4.10 - 1.16
  or traatga tootgato 18
\cdots, 0 = 1.77
..11 - 50
   i · ITA
 ... Artificial
 100
 .21 Artificial Sequence
· 23 Synthetic construct.
· 400> 177
 adjectatgag gattetgeag traatectge tigetetgge aacagggett 50
<..10> 178
·111 · 43
· ..... DNA
· /ls/ Artificial
<.120 ×
+221 Artificial Sequence
· .. .-.. · 1-43
T.33 Synthetic construct.
+ 400 178
dagagaccag gateateaag gggttegagt geaageetea ete 43
<.100 179
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*:125 DNA
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 qattcattgt titetittat etgiggggee tittitaetge teagagacaa 100
 надавададу ндадсасода адаадtgaaa atagaagttt tgcatcgtcc 150
 эqaaaaatgo totaagacaa goaagaaggg agacctacta aatgoccatt 200
 atomicon ita configiolaria dabigologia aattolacig bagooggada 250
 Takaatqaax gobacco kaa atuutttigti ottigutgittig jidcaadtoat 300.
 iaalidiita qarattorta tgabaqafat qtqbbqqqa qaaaaqrgaa 350
 rast ratiat arminit ma tit scatang daaadsaagg miatgrasaa 4 0
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This construction of the state of the state
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:210.- 180

<211 - 222

-212 · PET

1214 - Homo sapiens

<100 > 180

Mot Fro Lys Thr Met His Fhe Leu Fhe Arg Fhe Ile Val Phe Fhe I

Tyr Lou Trp Gly Leu Phe Thr Ala Gln Arg Gln Lys Lys Glu Glu 20 25 0

Ser Thr Glu Glu Val Lys Ile Glu Val Leu His Arg Pro Glu Asn  $\pm 5$ 

Cys Ser Lys Thr Ser Lys Lys Gly Asp Leu Leu Asn Ala His Tyr -50 -60

Asp Gly Tyr Leu Ala Lys Asp Gly Ser Lys Fhe Tyr Cys Ser Arg 65 70 75

The Gln Ash Glu Gly His Fré Lys Trp Phe Val Leu Gly Val Gly 80 85 90

Glr. Val. Ilo Lys Gly Leu Asp Ile Ala Met Thr Asp Met Cys Prö 100 100

Gly Glu Lys Arg Lys Val Val Ile Fro Pro Ser Phe Ala Tyr Gly 110 115

Lys 3ld Gly Tyr Ala Glu Gly Lys The Erc Erc Asp Ala Thr Leu 125 130 130

The The Glu He Glu les Tyr Ala Mal Thr Lys Gly Pro Aig Ser 140 146

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 i - Lys Glu Tyr Asn Val Tyr Gln His Asp Glu Leu
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<2.12> PRT

<2135 Homo sapiens

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Met Gly Leu Ser Ile The Leu Leu Cys Val Leu Gly Leu Ser 1 5 10

Gln Ala Ala Thr Fro Lys Ile Fhe Asn Gly Thr Glu Cys Gly Arg 20 25 30

Asn Ser Gln Fro Trp Gln Val Gly Leu Fhe Glu Fly Thr Ser Leu 35 40 15

Arg Cys Gly Gly Val Leu Ile Asp His Arg Trp Val Leu Thr Ala 50

Ala Bis Cys Ser Gly Ser Arg Tyr Trp Val Arg Leu Gly Glu His
65 70 75

Ser Leu Ser Gln Leu Asp Trp Thr Glu Gln Ile Arg His Ser Gly

Phe Ser Val Thr His Fro Gly Tyr Leu Gly Ala Ser Thr Ser His 95 100

Glu Ris Asp Leu Arg Leu Leu Arg Leu Arg Leu Iro Val Arg Val 110 115

Thr Ser Ser Val Glr Pro Leu Fro Leu Fro Ash Asp Cys Ala Thr 135

Ala Gly Thr Glu Cys His Val Ser Gly Trp Gly Ile Thr Asn His 140 146

Fro Arg Asn Fro Fhe Fro Asp Leu Geu Gln Cys Leu Asn Leu Ser  $15^{\circ}$  165 165

lle Val Cer His Ala Thr Gys His Gly Val Tyr Fro Gly Arg Ile 170 180

Thr Cer Ash Met Val Cys Ala Gly Tly Val Er - Tly Gin Acr Ala 195

You old bly Asp Cer oly bly Fro Len Val Oyo bly bly bal Lea

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- And Ply Lea Val Cer Try Gly Ser Va. Ply Fr. Tys Sly Min Asp 215 220 220
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- +.211 + 1485
- .112 · DNA
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- <400> 195

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Gly Leu Leu Lys Ala Arg Gln Glu Arg Arg Leu Ala Glu Ile Asn

Arg Glu Phe Leu Cys Asp Gln Lys Tyr Ber Asp Blu Blu Asn Leu

Pro Glu Lys Leu Thr Ala Phe Lys Glu Lys Tyr Met Glu Phe Asp

Leu Asn Asn Glu Gly Glu Ile Asp Leu Met Ser Leu Lys Arg M⊖t

Met Glu Lys Leu Gly Val Fro Lys Thr His Leu Glu Met Lys Lys

Met Ile Ser Glu Val Thr Gly Gly Val Ser Asp Thr Ile Ser Tyr GC,

Arg Asp Fhe Val Asn Met Met Leu Gly Lys Arg Ser Ala Val Leu

Lys Leu Val Met Met Phe Glu Gly Lys Ala Asn Glu Ser Ser Ero

Lys Fro Val Gly Fro Fro Fro Glu Ard Asp Ile Ala Ser leu Fro

<sup>211 + 197</sup> 

<sup>-211 4942</sup> 

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<sup>-21:</sup> Birm sapieds

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Ala Val Ala Cys Pro Thr Lys Cys Thr Cys Ser Ala Ala Ser Val 
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Arg Asn Ala Glu Arg Leu Asp Leu Asp Arg Asn Asn Ile Thr Arg 
$$\frac{16}{16}$$

Ile Thr Lys Met Asp Phe Ala Gly Leu Lys Asn Leu Arg Val Leu 
$$\frac{1}{60}$$

His Leu Glu Asp Asn Gln Val Ser Val Ile Glu Arg Gly Ala Phe 
$$99 - 100$$

 $<sup>-210 \</sup>cdot 198$ 

 $<sup>\</sup>leq 211 \leq 1523$ 

<sup>&</sup>lt;:11 PFT
<:13 Homo sapiens</pre>

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Arg	Leu	His	Ser	Aan 215	His	Leu	Tyr	Суѕ	Asp 120		His	Leu	Ala	Trp
Leu	Ser	Asp	Trp	1.40 2.30	Arg	Gln	Arg	Arg	Thr 235	Val	Зlу	Gln	Fhe	Thr
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Val	Gln	Lys	Lys	Gla SbO	Tyr	Val	Суз	Pro	A1 4	Pro	His	Ser	Glu	Pro 270
Pro	Ser	Cys	Asn	Ala Dire	Asn	Ser	He	Ser	Суз 180	Pro	Ser	Fro	Cys	Thr Pag
Cys	Ser	Asn	Asn	Ile Pol	Val	Asp	Суз	Arg	GLY LHS	Lys	Gly	Leu	Met	Glu
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Ile	Ala	Pro	Asp	Ala	Phe	Gln	Glγ	Leu	Lys Egs	Ser	Leu	Thr	Ser	Le u 360
Val	Leu	Tyr	Gly	Æn S⊬ <sup>©</sup>	Lys	Ile	Thr	Glu	Ile V≃o	Ala	Lys	Gly	Leu	Fhe 375
Asp	Gly	Leu	Val	Ser she	Leu	Gln	Leu	Leu	Leu 385	Leu	Asn	Ala	Asn	L78
lle	Asn	Суз	Leu	Arq 395	Val	Asn	Thr	Fhe	Gln 400	Asp	Leu	Gln	Asn	Leu 405
Asn	Fen	Lou	Ser	Leu 410	Tyr	Asp	Asn	Lys	lieu 415	Gln	Thr	Ile	Ser	lys 420
Gly	Leu	Fhe	Ala	Frd 425	Leu	Gln	Ser	He	G1n 430	Thr	Leu	His	Leu	Ala 435
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Size Asp Val Thr Glo Leu Tyr Leo Glo Gly Ash Bis 140 Thr Aly Val Fro Arg 3b. Leu Ser Ala Leu Arg His Leu Thr Lou Ile Amp New Ser Ash Ash Ser Ile Ser Met Lew Thr Ash Tyr Thr Ehe Ser Asn Met Ser Hit Leu Ser Thr Leu Ile Leu Ser Tyr Asn Arg 3 ) (3 leu Arg Cys Ile Pro Val His Ala Phe Ash Gly Leu Arg Ser Leu Arg Val Leu Thr Lou His Gly Asn Asp The Ser Ser Val Pro Glu Gly Ser Ehe Ash Asp Leu Thr Ser Leu Jer His Leu Ala Leu Gly 8.45 Thr Asn Pro Leu His Cys Asp Cys Ser Lei Arg Trp Leu Ser Glu Trp Val Lys Ala Gly Tyr Lys Glu Pro Gly Ile Ala Arg Cys 3↔r Ser Pro Glu Pro Met Ala Asp Arg Leu Leu Thr Thr Ero Thr His Arg Phe Gln Cys Lys Gly Pro Val Asp Ile Asn Ile Val Ala Lys Cys Asn Ala Cys Leu Ser Ser Pro Cys Lys Asn Asn Gly Thr Cys Thr Gln Asp Pro Val Glu Leu Tyr Arg Cys Ala Cys Pro Tyr 14.4 (1) Ser Tyr Lys Gly Lys Asp Cys Thr Val Ero Ile Asn Thr Cys I:e Gln Asn Pro Cys Glr. His Gly Gly Thr Cys His Leu Ser Asp Ser His Lys Asp Gly Phe Ser Cys Ser Cys Pro Leu Gly Phe Glu Gly Gln Arg Cys Glu Ile Asn Pro Asp Asp Cys Glu Asp Asn Asp Cys Glu Asn Asn Ala Thr Cys Val Asr Gly Lle Asn Asn Tyr Val Cys The Cys Fro Ero Asm Tyr Thr Gly Glu Leu Cys Acr Gla Val II o 1925 1936 1936 Aug Har Tys Val Ert Glu Leu Ash Ieu Tys Aln His Alm Ala Lyr

- 7. The Er. Led Asp Tys (Ty Fhe Ser C.s Glu Cys Val Pro Gly 1065
  1065
- Tyr Sor Oly Lys Lei Cys Glo Thr Asp Asu Asp Asp Cys Val Ala 1070 1080
- The Cys Arg His Gly Ala Bln Cys Val Asp Thr He Asn Gly 1085 1095
- His Pro Pro Pro Met Val Leu Leu Gln Thr Ser Pro Cys Asp Gln 1115 1125 1125
- Tyr Glu Cys Gln Ash Gly Ala Gln Cys Lie Val Val Gln Glu 1130 1140
- Fro Thr Cys Arg Ny, Fro Pro Gly Phe Ala Gly Pro Arg Cys Gla 1145 1155
- Lys Leu Ile Thr Val Asn Phe Val Gly Lys Asp Ser Tyr Val Glu 1160 1165 1170
- Leu Ala Ser Ala Lys Val Arg Pro Gln Ala Asn Ile Ser Leu Gl:: 1175 1185
- Val Ala Thr Asp Lyc Asp Ash Gly Ile Let Leu Tyr Lys Gly Asp 1190 1195
- Asn Asp Pro Leu Ala Leu Glu Leu Tyr Gin Gly His Val Arg Leu 1.110 1.115
- Val Tyr Asp Ser Lou Ser Ser Pro Pro Tha Thr Val Tyr Ser Val 1000 1000
- Glu Thr Val Asn Asp Gly Gln Phe His Ser Val Glu Leu Val Thr 12.95 12.45 1.45
- Leu Asn Gln Thr Leu Asn Leu Val Val Asp Lys Gly Thr Pro Lys 1..50 1..50 1..50
- Ser Leu Gly Lys Leu Gln Lys Gln Fro Ala Val Gly Ile Asn Ger 1.365 1375
- Fro Leu Tyr Leu Gly Gly He Fro Thr Ser Thr Gly Leu Ser Ala 1280 1281
- I du Ara Glr Gly Thr Asp Arg Pro Leu Gly Gly Fhe His Gly Cys 1995 1300 1306
- The His Glu Val Arg The Ash Ash Glu Leu Gln Ash The Lys Ala 1310 1315 1320
- Ten Err Err Glm Ser Teu Gly Val Cer Err Gly Cyc Tys Ser Cys 1925 - 1939 - 1935

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The Call Cyc Byo Bio Glo Lou Cyc Arg Cer Tall Wit Lys Asp Ser
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- Val Val Cys Glu Cys Ara Fro Gly Trp Thr Gly Fro Leu Cys Asp 1305 1-40 1365
- ol: Olu Ala Arg Asp Fro Cys Leu Gly His Arg Cys His His Gly 1370 13:4
- Lys Cys Val Ala Thr Gly Thr fer Tyr Mg\* Cys Lys Cys Ala Glu 1385 1390
- 11; Tyr Gly Gly Asp Leu Cys Asp Asn Lys Asn Asp Ser Ala Asn 1400
- Ala Cys Ser Ala Phe Lys Cys His His Gly Gln Cys His Ile Ser 1415
- Asp Gln Gly Glu Pro Tyr Cys Leu Cys Gln Pro Gly Phe Ser Gly 1.435
- Glu His Cys Gln Gln Glu Asn Pro Cys Lew Gly Gln Val Val Arg
- Gru Val Ile Arg Arg Gln Lys Gly Tyr Ala Ser Cys Ala Thr Ala
- Ger Lys Val Pro Ile Met Glu Cys Arg Gly Gly Cys Gly Pro Gln
- Tyl Cys Gln Pro Thr Arg Ser Lys Arg Arg Lys Tyr Val Phe Gln 1490
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- < ()
- <./11 Artificial Sequence</pre>
- <.1.21</pre>
- 73.30 Jynthetic construct.
- <4007 199</pre>
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- ~110- E00

- +21: Artifimial
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<1.13° Homo sapiens
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cotatocqag tagaaaaaaa qotatgaggt ttootaaact agaactggac 600
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    7.10 (2.13)
    7.21 (144)
    7.10 (157)
    7.13 (157)
    7.24 (157)

14412 203
 Mot Lys Ala Ala Gl; He Leu Thr Leu He Gly Cys Leu Val Thr
 Gly Ala Glu Ser Lys Ile Tyr Thr Ard Cys Lys Leu Ala Lys Ile
  ib. Ser Arg Ala Gry Leu Asp Ash Tyr Trp Gly Phe Ser Leu Gly
  Ash Trp Ile Cys Met Ala Tyr Tyr Glu Ser Gly Tyr Ash Thr Thr
  Ala Pro Thr Val Lod Asp Asp Gly Ser Ile Asp Tyr Gly Ile Phe
 Glo Ile Ast Ser Fhe Ala Trp Cys Arg Arg Gly Lys Leu Lys Glu
  Asn Asn His Cys His Val Ala Cys Ser Ala Leu Ile Thr Asp Asp
  Leu Thr Asp Ala I.e Ile Cys Ala Arg Lys Ile Val Lys Glu Thr
 Gln Gl/ Met Asn Tyr Trp Gln Gly Trp Lys Lys His Cys Glu Gly
 Arg Asp Leu Ser Giu Trp Lys Lys Gly Cys Glu Val Ser
                   140
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<.110> .204
41.1112 24
-0125 DNA
FU139 Artificial
1.12012
· :::1 Artificial Sequence
·1.1.12% I-24
<223 Synthetic construct.
< 1000-..04
usaqqetttq aqqatqaaqq etde 24
F.5102 .:05
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7.13 Artificial
1116
ruzl> Artificial Sequence
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       Artificial
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      Tynthetic construct.
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L. 1 Artificial Sequence
*1... 1-47
221 Synthetic construct.
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· Place DNA
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<sup>1211 + 210</sup> 211 - 61

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;_::	. 78	F1.0	Lys	Leu 20	Fhe	Thr	Leu	Val	Ser	Ala	Cys	Ile	Pro	Val 30
3 T.	, ,	Leu	Ala	Arg 35	Arq	Arq	Lys	Lys	Ile 40	Leı	Fhe	Tyr	Cys	His 45
:′-	110	Азг	Leu	I.en 50	I.eu	Thr	Lys	Arg	A 4p 55	Ser	Fhe	I.eu	Lys	Ar ı
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ite	Lys	Glu	Thr	Fhe 95	Lys	Ser	Leu	Ser	H:s 100	Ile	Asp	Pro	Asp	Val 105
1.641	iyı	Free	Ser	Leu 110	Asn	Val	Thr	Ser	2) 115	Asp	Ser	Val	Val	P: 3 15
G]:1	Lys	Fen	Asp	Asp 121	Leu	Val	Pro	Lys	G. 7 1 ()	Ly.s	Lys	Fhe	Leu	L·· 1 1 :
Leu	Ser	Ile	Asn	Arg 140	Tyr	Glu	Arg	Lys	Lyn 149	Asn	Leu	Thr	Leu	Ala 150
Leu	Glu	Ala	Leu	Val 155	Gln	Leu	Arg	Gly	Ara 160	Leu	Thr	Ser	Gln	Asr- Infi
Trp	Clu	Arg	Val	His 170	Leu	Ile	Va1	Ala	317	Gly	Tyr	Asp	Glu	Arq 180
Val	1,001	Slu	Asn	Val 195	Glu	His	Tyr	Gln	61u 190	Leu	Lys	Lys	Met	Val 195
Gln	Gln	Ser	Asp	teu Enn	Gly	Gln	Tyr	Val	Thr 20%	Phe	Leu	Ara	Ser	Phe 210
,'esr	Asp	Lys	Gln	Lys	Ile	Ser	I.eu	I eu	His 220	Ser	СУS	Thr	Суѕ	Val 225
1	Tyr	Thr	Fr	::er ::30	Asn	Glu	His	Fhe	G. y	110	Val	Fro	I.eu	Glu .:40
Ala	Me+	71.77	Met	Gli J45	Cys	Fro	∵al	Ile	Ala [[]	Vai	Asn	Ser	Giÿ	Gly 5°
ir	1 -= 1	G[ ]	COT	110	dsy	His	Cer		Thr	Gly	Fhe	ļen	( ;; ?	Glu

- The Cop Fr. Value His the Yer dim Ala Ile Cho Lys the Ile Ard  $\sqrt{2}$  . Let
- r Cer Leu tys Ala Thr Mot Bly Leu Ala Bly Ari Ala Arg (36 - 38)
- Is Glu Lys the Fer Pro Glu Ala Phe Thr Glu Glu Glu Leu Tyr
   35
   310
   315

Ari Tyr Val Thi Lys Leu Leu Val

- -1 211
- . 11 1554
- ANT + L'NA
- -. No Homo sapiens
- + 400> 211 macturgosq atomismacq tggotosotg ggeggeagaa coatqttgga 50 arttegrigate tilbricemitta gettetidet ggegittiggig ggageogigd 100totacetota toogqettee agacaagetg caggaattee agggattact 15%ccasctgaag aaaaagatgg taatottoca gatattgtga atagtggaag 200 \*ftgcatgag ttootggtta atttgcatga gagatatggg cotgtggtot 25% contictigati inggermacyc stoatoaitha ottigagcae igitualigia 700. otgaagdage atatosatoo caataayasa teggabbett tigaaaccat 350 yetgaaqtea ttattaaggt atmaatotgg tyggtggbagt ytgagtgaaa 400 annacatgaq gaaaaaattg tatgaaaatg gtgtgabtga ttototgaag 450. agtaactitig occiontoct amagnities gamquattat tagailmaty 500 grictectad ocagamacco abbaegiged defeagedag catalgetig 550. giftigstat gaagteigtt acaeagaigg taaigggiag tacailigaa 600. datgafcagq aagtoattog bttocagaaq aatcatggca cagtttggto 650 tgagattgga aaaqqottto tagatgggto acttgataaa aacatgacto 700 unmaamaacu atalumaqat geenteatge aactggagte tgttttaagg 750. uncatratau wagabrosaa aggbaygaac ttosgtoaac atattitoat 800 tomotrontta otamaaygga achitaatga ocaacagato ofagaagaca 850. statustatt ititetuden auttubataa taabtgoaaa attgiutabb 900 tuurisitot attiittaii ysiitotaaa gaaattoalu saaaattata 950 t kaala bata laan malabitti oo baaan ka tirongoo kabii inaga kalabi 1660

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210> 21.5

.211> 460

+2125 FRT

/213x Hemo sapiers

<400> 212

Met Leu Asp Phe Ala Ile Fhe Ala Val The Fhe Leu Leu Ala Leu 1 - 5 - 10 - 10

Val Gly Ala Val Leu Tyr Leu Tyr Pro Ala Ser Arg Gln Ala Ala 20 25 30

Gly The Pro Gly Tie Thr Fro Thr Glu Glu Lys Asp Gly Asn Leu  $3^{\circ}$  45

Pro Asp Ile Val Asn Ser Gly Ser Leu His Glu Phe Leu Val Asn 50 55 60

Leu His Glu Arg Tyr Gly Pro Val Val Ser Phe Trp Phe Gly Arg 65 76 75

Arg Lou Val Val Ser Leu Gly Thr Val Asp Val Leu Lys Gln His 80 -90

Ile Asn Pro Asn Lys Thr Ser Asp Pro The Glu Thi Met Leu Lys 95 100 105

For Leu Leu Ard Tyr Glr. Cer Gly Gly Gly Cer Val Ser Glu Asn 110 120

His Met Ard Lys Dy. Len Tyr Glu Ast Gly Til Thr Ast Cer Len 12 130

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11 r.	H18	Met	Leu	91y 170	Fhe	Ala	Mot	Lys	70± 175	Vil	Thr	Gln	Met	Val 180
Mot	Glÿ	Sor	Thr	Fho 185	Glu	Asp	Asp	-iln	11 u 140	Val	He	Arg	Fhe	Gln 195
iys	Asn	His	31;	Thr 300	Val	Trp	Ser	Glu	11e 705	-:1 <i>'</i> ;	Lys	Gly	Fhe	Leu 210
Ast	Gly	Ser	I.eu	Asr 315	Lys	Asn	Met	Thr	Arg .::0	Lys	Lys	Gln	Tyr	:11 n :125
ASP	Ala	L∈u	Met	61n 330	Leu	Glu	Ser	Val	Leu .135	Ara	Asn	Ile	Ile	Lys 240
elu	Arq	Lys	Gly	Arg . 45	Asn	Fhe	Ser	Gln	H. 3 . 150	110	Fhe	Ile	Asp	Ber Jb5
Leu	Va]	Glr	Gly	Asn 260	Leu	Asn	Asp	Gln	Gin 155	Ile	Leu	Glu	Asp	3er .:70
Met	He	Fh€	Ser	he . 75	Ala	Ser	Cys	lle	11e 240		Ala	Lys	I.eu	-78 -75
Thr	Trp	Ala	ile	1773 795	Fhe	Leu	Thr	Th.r	1145	G l 11	Glu:	Val	Glr	1.70 5.10
Lys	Leu	Tyr	Glu	G1u 105	Ile	Asn	Gln	Val	Phe 310	Gly	Asn	Gly	Fro	₩41 315
Thr	Fro	Glu	Lys	11e 320	Glu	Gln	Leu	Ara	Tyr 3,5	Cys	Gln	His	Val	Бец 330
Cys	Glu	Thr	Val	Arg 135	Thr	Ala	Lys	Leu	Thr 340	Pro	Val	Ser	Ala	G1r. 545
Leu	Gln	Asp	Ile	Glu 750	Gly	Lys	Ile	Asp	Arg	Fhe	Ile	Ile	Pro	Arg 350
Glu	Thr	Leu	Val	I.eu - 65	Tyr	Ala	Leu	Gly	Val 370	Val	Leu	Gln	Asp	Pro 375
Asn	Thr	Trp	Fr*	Ger Bac	Fre	His	Lyra	Flic	AFF 385	Fr	Arr	Arg	The	3.50 V:35
Asp	Glu	Ľė:J	Val	Met 395	lys	Tł.r	Fhe	Cer	Ser 400	Leu	Gly	Fhe	Ser	G17 405
T!.r	Gin	Glu	Cys	!r^ 410	Glu	Lou	Arī	Fhe	Ala 415	Туг	Me, t	Vāl	Thr	Thr 450
Ta!	1,601	Len	. 61	V 41	Lett	V 11	Lyn	Ārģ	I.6-1 4 ·	Hir	[ ·- :	leu	Chir	Val 4 · ·

. By the Wall II. the the Lyr Syr Air is a Wall The Ar Ger  $44^{\circ}$ 

Arg Mu Mir Ala Irp Hie Thr Val Jer Lys Arg Tyr  $\frac{400}{400}$ 

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. 211 → 75 u

l. ONA Lla Hema sapiens

400 + 213

starafittut eggettungg ggagantina igagtnints tototgaact 50 tobia stea gagacogoog coottut we edamqueest aggeogagte 100 inappyotty typocholog offichtgaca efoctydage afotygtgyf 150 bytbateacc thatfiftyd coogygacay caabataray gootgorige 200 ntomoungtt cacccccqag qagtatgana adcaggacat toagctggtg 250 poopugatet ofgecacoot gggoutettt goagtggage tggooggttt 300 notificagga ghistocatgt tipaabagdan bbagagdoth alotebattg 350 rggotianty tagtgeatur gtggeochgh cottettrat attegagogt 400 typymathyda diadytatty giadatiffit gipticiada gigodotido 450 agotgreact gaaatggett tattegteac egtettiggg etgaaaaaga 500 radicitoty attacettoa tgaegggaad etaaggaega agestaeagg 550 ggosaqqqoo qottoqtatt ootqqaaqaa qqaaqqoata qqottoqqtt 600 ttd:dd:togg aaactgottd tgctggagga tatgtgttgg aataattadg 650 roffgagtot gggattator gcattgtaff fagtgofffd taataaaata 700 'guitigtad taacattuag acttatatan Agittitagyg gacaattaaa 750 панаааааа 759

2010 - ..14

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· .'13 Homo sapiens

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Met Sly Arg Val Ser Sly Leu Vil Erc Ser Ari Phe Leu Thr Leu
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Teu Ala His Lou Val Val Val lle Thr Len The Trp Ser Arg Asp 20 20 20

ver Ash Ive 31h Ala dyn 165 Fr. 165 Thi Ene Thr Fre 31a Glo 45

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The Met Fhe Ash Ser Th: Gln Ser Leu Ile Ser Ile Gly Ala His 80 85 90
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Cys Cer Ala Ser Val Ala Leu Ser Fhe Fhe Ile Phe Glu Ard Trp  $g \in \mathbb{R}$ 

C1: Cys Thr Thr Tyr Trp Tyr 11e Fhe Val Fhe Cys Ser Ala Leu 110 \$115

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Ly.; Lys Lys Pro Phe 140

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tecattggea teagetteat gggeaactae atggateggg tgeecadaee 450

ccangosate cyggeagece anggtetact ggestgeggt gtggeteagg 590

gagnoctgay ştimaabtat giqotnaaaa aabaccagga tgtqcaqcat 150

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<sup>- 210 - 216</sup> 

<sup>· 211 · 196</sup> 

ratz EFT

H F Sapina

.16 Dir Arg Arg Der Met Leu Deu Als Trp Als Leu in Ger Leu At a Leu Gly Ala Ala Gln Wlu Thr Clu Asp Fro Ala Cys Cys Ter Fre Ile Val Fro Arg Ash Glu Trp Lys Ala Leu Ala Ser Glu . Ala Glm His Leu Ser Leu Ern Leu Arg Tyr Val Val Dal Der His Thr Ala Gly Ser Ser Cys Ash Thr Pro Ala Ser Cys Gln Gln Eln Ala Arg Asn Val Gln His Tyr His Met Lys Thr Leu Gly Trp Tys Asp Val Gly Tyr Asn Phe Leu Ile Gly Glu Asp Gly Leu Val Tyr Glu Gly Ard Gly Trp Asn Phe Thr Gly Ala His Ser Gly His Leu Trp Asn Fro Met Ber Ile Gly Ile Ser Fhe Met Gly Asn Ty: Met Asp Arg Val Pro Thr Fro Gin Ala Ile Arg Ala Ala Gln Gly beu beu Ala Cys Gly Val Ala Gln Gly Ala beu Arg Ser Asn Tyr 160 Val Leu Lys Gly His Arg Asp Val Gln Arg Thr Leu Ser Pro Gly 170 175 180 Ash Gln Leu Tyr His Leu Ile Gln Ash Trp Pro His Tyr Arg Ser

Pro

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<.11> 1871

· P12> INA

calls Hemma sapiens

400 - 217

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utgigotgag raingcatga ogotgaagid ocaanniigg ggtiittidat 1400
utritigadag attgaccato tofotocago caugodacco ettro dada 145)
fitninfictio igocagiaci coccofijiac cacccafigo figaligicana 1500.
nonstrutta agotaayana qgargaftyt ygtoofooca bantaayyni 155
minimi mada leginat erama tibin ngaladag dagminimina lagagtinad ng 165
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- · /11 · 352 21/ FRT
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- < 400 > 218
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- Leu Tyr Leu Val Ile Cys Gly Gln Asp Asp Gly Pro Pro Gly Ser
- Giu Asp Pro Glu Ar; Asp Asp His Glu Gly Gln Pro Arg Pro Arg
- Wal Fig Arg Lys Ard Gly His Ile Ser Fro Lys Ser Ard Pro Met
- Ala Asn Ser Thr Lee, Leu Gly Leu Leu Ala Pro Pro Gly Glu Ala
- Trp Gly Ile Leu Gly Gln Pro Fro Asn Arg Fro Asn His Ser Fib
- Pro Pro Ser Ala Ly: Val Lys Lys Ile Phe Gly Trp Gly Asp Phe  $\Theta^{\pm}$ . 100
- Tyr Ser Asn Ile Lyg Thr Val Ala Leu Asn Leu Leu Val Thr Gly 120 115
- Lys Ile Val Asp His Gly Asm Gly Thr Phe Ser Val His Phe Gln 125
- His Asn Ala Thr Gly Gln Gly Asn Ile Ser Ile Ser Leu Val Pro
- irc Ser Lys Ala Val Glu Phe His Gln Glu Gln Gln He Phe He
- Gl'i Al: Lys Ala Scr Lys Ile Fhe Asn Cys Arg Met Glu Trp Glu
- Tys Val Glu Arg Gly Arg Ard Thr Cer Lou Cys Thr His Asp Fro 185
- Ala ly: He Cyn Der Arb Asp His Ala Glm Der Der Ala Thr Trp 20,5

for Cya Ser Alm Fro the Lya Wil Wel Tyo Wil Mys Illo Ala Elle Lib

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4013> Homo sapiens

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4.2130 Homo sapiens

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Thr Glu Pro Ile Val Leu Glu Gly Lys Cys Leu Val Val Cys Asp

Ser Ash Ero Ala Thr Ash Ser Lys Gly Ser Ser Ser Ser Fro Lon

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<sup>-2112 357</sup> 

<sup>+21% +</sup> FFT

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Cys	Glu	Lys	Lys	Lys 165	Trp	Gly	Ile	Leu	Leu 190	Ile	Val	Leu	Leu	Tl. r 1 (4%
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<sup>&</sup>lt;210 × 227

HU11> 832

Külez ERT

<sup>&</sup>lt;d13 H.mo sapiens</pre>

<sup>&</sup>lt;400× 227

Mot Fhe Ala Leu Gly Leu Fro Fhe Leu Val Leu Leu Val Ala Ser 1 5 10 15

Val Glu Mer Bum Leu Gly Val Leu Gly Fro Lys Ast. Val Ser Glt. 20 - 12

Lep Ala Old Ebe Gli Arg Thr Tyr Val Asp Bla Val Ash Cor ion Val Ash Ile Tyr Thr The Ash His Thr Val Thr Arg Ach Tre The Giu Gly Val Arg Val Ser Val Asm Val Leu Asm Lys Gen Lys Gly Ala Pro Leu Leu Phe Val Val Ard Gln Lys Glu Ala Vil var Ser Ene Gln Val Pro Leu Ile Leu Arg Gly Met Phe Gln Arg lys Tyr Leu Tyr Glin Lys Val Glu Arg Thr Leu Cys Glin Pro Pro 11:) 115Thi Lys Ash Glu Ser Glu Ile Gln Phe Phe Tyr Val Asp Val Ser Thr Leu Ser Pro Val Ash Thr Thr Tyr Gir. Leu Arg Val Ser Arg Met Asp Asp Phe Val Leu Arg Thr Gly Glu Gln Phe Ser Phe Asn Thr Thr Ala Ala Gli Pro Gli Tyr Phe Lys Tyr Glu Phe Pro Glu Gly Val Asp Ser Val Ile Val Lys Val Thr Ser Ash Lyt Ala File 185 190 Pro Cys Ser Val IIe Ser Ile Gln Asp Val Leu Cys Pro Val Tyr 200 .205 Asp Leu Asp Asn Asn Val Ala Phe Ile Gly Met Tyr Gln Thr Met Thr Lys Lys Ala Ala Ile Thr Val Gln Arg Lys Asp Phe Pro Ser Asn Ser Phe Tyr Val Val Val Val Lys Thr Glu Asp Gln Ala Cys Gl; Gly Ser Leu Pro Phe Tyr Pro the Ala Glu Asp Glu Pro Val Asr Gln Gly His Arg Gln Lys Thr Leu Ser Val Leu Val Ser Sin Ala Val Thr Wer Glu Ala Tyr Val Wer Gly Met Leu Fhe Cys Leu Gly He Fhe Leu Ser Fhe Tyr Leu Leu Thr Val Leu Leu Ala Cyr Tip the Ash Trp Ara Glin Lys Tya Lyn Thr Lea Leu Tal Ala

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Asn	His	Asn	Arg	Ala 550	Leu	Leu	Arg	Asn	Asp. 535	Leu	Cys	Ala	Leu	Glu 540
Cys	Gly	Ile	Fro	Lys 545	His	Phe	Gly	Leu	Fh∈ 550	Tyr	Ala	Met	Gly	Thr 555
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Gly Ieu Ile Met Arg Pro Asn Asp Phe Ala Ser Tyr Leu Leu Ala
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The Sty Ile Cys Asn Leu Leu Leu Tyr Ph- Ala Phe Tyr Ile Ile
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Met Lys Leu Arg Ser Gly Glu Arg Ile Ly: Leu Ile Pro Leu Leu
Cys lle Val Cys Thr Ser Val Val Trp Gl; Phe Ala Leu Phe Phe
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<sup>\*.1105 229</sup> 

<sup>12112-807</sup> 

<sup>71. +</sup> FRT

<sup>\*</sup>P1% Home Hapiens

<sup>. :</sup> r. 220

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-:	1.	Lys	Ala	Thr 65	Glu	Gly	Fro	Phe	Ala 70		Asp	Pro	Asp	391
٠.٠,	Hic	Leu	Leu	Val 80		Ārģ	Ala	Leu	Asp 85	Arq	Glu	Glu	Gln	a 1 A 106
311,	Тут	Glr.	Leg	31 n 95		Thr	Leu	Glu	Met 100		Asp	Gly	His	731 106
Lesu	Trp.	Gly	Free	Gin 110	Fro	Val	Leu	Val	Ніз 115	Val	Lys	Asp	Glu	Asr. 1.50
Asp	Gln	Val	Pro	His 125	Ph÷	Ser	Gln	Ala	Ile 130	туг	Arg	Ala	Arg	Lenu 135
Ser	Ara	Gly	Thr	Arg 140	Pro	Gly	He	Pro	Phe 145	Leu	Phe	Leu	Glu	Al 1 150
Cer	Asp	Arq	Asp	G1u 155	Pro	Gly	Thr	Ala	Alsn 160	Ser	Asp	Leu	Arg	Phy. 167
Hir	Πle	Leu	Ser	31n 100	Ala	Fro	Ala	Gln	Pr.!	Sor	Prc	Asp	Met	1 3 6 0
Gln	Lou	Glu	Firo	Arg 185	Leu	Gly	Ala	Leu	Ala 190	Leu	Ser	Pro	Lys	617 195
Ser	Thr	Ser	Leu	Asp .:00	His	Ala	Leu	Glu	Ard Ard	Thr	Tyr	Gln	Leu	Le i 210
Vai	Glm	Val	Lys	Asp	Met	Gly	Asp	Gln	Al a	Ser	Gly	His	Gln	Aia
Thr	Ala	Thr	Val	Glu .°30	Val	Ser	Ile	Ile	Glu	Ser	Thr	Trp	Val	Ser 140
Leu	Glu	Pro	Ile	His	Leu	Ala	Glu	Asn	Len USO	Lys	Val	Leu	Tyr	Pro
His	His	Met	Ala	Gln	Val	His	Trp	Ser	Gly Dos	Glÿ	Asr	Val	His	1.yr 70
His	Len	Gla	Ser	His 171	iro	Fro	Gly	Pro	Ehe 180	Glu	Val	Ast.	Ala	Glu 285
117	Asti.	Leu	Tyr	Val 255	Thr	Arg	clu	Leu	ASF 295	Arg	Glu	Alā	Gln	Ala 300
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a Aladr 1991 Rin Des Bir Valley Val Mit Aspolits Am to Val in Tile Cym Fra Ir. Ann Asp Fr. The Val Ser Ile The Lou Ser Fro Fro Gly Thr Glu Val Thr Aru Leu Ser Ala Glu Asp Ala Asp Ala Fro Gly Ser Fro Asn Ser His Val Val Tyr 370 366 Gli leu Leu Ser Fro Glu Pro Glu Asp Gly Val Glu Gly Arg Ala the Glr. Val Asp Pro Thr Ser Gly Ser Val Thr Leu Gly Val Leu 4()() Pro Leu Arg Ala Gly Gln Asn Ile Leu Leu Leu Val Leu Ala Met Asp Len Ala Cly Ala Glu Gly Gly Phe Ser Ser Thr Cys Glu Val Glu Val Ala Val Thr Asp Ile Asn Asp His Ala Pro Glu Phe Ile Thr Ser Gln He Gly Pro He Ser Jen Pro Gln Asp Val Glu Pro Gly Thr Len Val Ala Met Leu Thr Ala Ile Asp Ala Asp Leu Glu Pro Ala Phe Arg Leu Met Asp the Ala Ile Glu Arg Gly Asp Thr 485 4 46 Glu Gly Thr The Gly Leu Asp Trp Glu Pro Asp Ser Gly His Val Arg Leu Arg Leu Cys Lys Asn Leu Ser Tyr Glu Ala Ala Pro Ser His Glu Val Val Val Val Gln Ser Val Ala Lys Leu Val Gly Fro Gly Fro Gly Fro Gly Ala Thr Ala Thr Val Thr Val Leu Val Glu Arg Wal Met Fro Fro Eys Leu Asp Gln Glu Ser Tyr Glu Ala Ser Wal Pro Ile Ser Ala Fr. Ala Gly Jer Fhe Leu Leu Thr He Gin Fr. Cer Asp Do lie Cer Ar; Thr Hou Ard Phe Cer Leu Foa Tall Alm Admirer the Ally Tip Ten Tys The ten Lys the Der Sly

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 Dir Tyr Thr Val Leu Val Glu Ala Glr Asp Thr Ala Leu Thr Leu
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 + 4 ... The Tal Ser Gly Pro Ser Lys Asp Fro Asp Leu Ala Cer
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 Glo Arg Asp Tip Arg Leu Glo Thr Leu Ash Gly Ser His Ala Tyr
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 Iou Thr Leu Ala Leu His Trp Val Glu Fro Ard Glu His Ile Ile
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 Bln Fro Ala Asp Ser Val Pro Leu Lys Ala Thr Val
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+1210> 230
·1211> 50
+312> DNA
****:13* Artificial
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1981: Artificial Cequerce
1723 Synthetic construct.
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kv10 - v:1 k211 - v4 k212 - 1MA r215 - Artificia, Jogeshor

< 400 - 230

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+312 PNA
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- ...11:> ...786
 11.11 DNA

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Home sapiens
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 cagaaatgga uacgagatca gcaaattgas tcaactagtd sattcaaaca 150
 acttgaaget caatttetgg maatetreet eeteettsaa teggeetgig 200
 gatgteetgg teccatetgt cagtetgeag geatttaaat cetteetgag 250
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 taganaatga agatgatgaa atgmaacada atgaagggda agaadggagd 350
 agtaataact teaactaegg ggettaeeat teertggaag etatttaeea 400
 cgagatgqac aacattgccg caqacttter tgacctggcg aggagggtga 450
agattquaca ficgittgaa aaccqgccqa tgtafgtact gaagticagc 500
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<210> ≥34

< .111> 421

<.'12> PRT

<.113> Homo sapiens

<400> 334

Met Arg Trp lie Leu Fhe Ile Gly Ala Leu Ile Gly Ser Ser Ile 5 10 15

Cys Gly Gln Glu Lys Fhe Phe Gly Asp Gln Val Leu Ara Ile Asn 20 -25

Va. And Ash Gly Asp Glu Ile Ser Lys Leu Ser Gln Leu Val Ash \$35\$ \$40\$

Ser Ash Leu Lys Leu Ash The Trp Lys Ser Iro Ser Ser The 50 55 60

Ash Arg Fro Val Asp Val Leu Val Pro Ser Val Ser Leu Gln Ala 65 70 75

Phe Lys Ser Phe Leu Arg Ser Gln Gly Leu Glu Tyr Ala Val Thr 80 85 90

lle Glu Asp Leu Gin Ala Leu Leu Asp Asn Glu Asp Asp Glu Met 95 100 105

Oln His Ash Glu Gry Gln Glu Arg Der Ser Ash Ash The Ash Tyr 110 115

Gly Ala Tyr His Car Lou Glu Ala Ile Tyr His Glu Met Asp Asc. 125

The Ala Ala Asp Phe Pro Asp Leu Ala Arg Arg Val Lys The Gly 140 145

But Der The Glo Ash Ard Er. Met Tyr Val Ted Tyr The Cer Thr 185 186

	1	11.5	741	7.271 171	Arı	řr:	Ala	V :1	Tir 175	189	Ann	Ali	:19	11.
¥*.	201	Arq	127.17	Trp 185	110	Ser	Gìr.	ālā	Thr 190	Ala	Ile	Trp	Thr	Al ( 195
Ā::	Lys	Ile	Val	ser Suc	Asp	Туг	Gln	Arg	Asp Ph.	Fic	Ala	Ile	Thr	3ei 310
He	Leu	Glu	Lys	Met 315	Asp	Ile	Fhe	Leu	Le 1 .:20	irc	Val	Ala	Asn	Pro
AUI	Gly	Tyr	Val	Tyr 330	Thr	Gln	Thr	Gln	Astı 135	Arg	i.eu	Trp	Arq	Lys .:40
Thr	Arg	Ser	Ar:	Asn 245	Pro	Glγ	Ser	Ser	250 CA:	īle	Gly	Ala	Asp	5ro 255
ĀSL	Arg	Asn	Trp	Alan 260	Ala	Ser	Phe	Ala	G1; 26:	Lys	Gly	Ala	Ser	Asp 270
Asn	Pro	Cys	Ser	GLu E75	Val	Tyr	His	Gly	280 Pro	His	Ala	Asn	Ser	Glu 285
l f V	Glu	Val	Lys	Ber . 30	Val	Val	Asp	Phe	Ile (G⊑	Gln	Lys	His	Gly	Asn Rop
Fhe	Lys	Gly	Fhe	lle 394	Asp	Leu	His	Ser	Tyr 11()	Ser	Gln	Leu	Leu	Met Un
Tyr	Pro	Tyr	Gly	Tyr 3.:0	Ser	Val	Lys	Lys	Ala -25	Fro	Asp	Ala	Glu	:In :30
Leu	Asp	Lys	Val	Ala 35	Arg	Leu	Ala	Ala	Lyr 340	Ala	Leu	Ala	Ser	¥al ⊣45
Ser	Gly	Thr	Glu	Tyr 350	Gln	Val	Gly	Pro	Thr 355	Cys	Thr	Thr	Val	Tyr 360
Pro	Ala	Ser	Gly	Ser 265	Ser	Ile	Asp	Trp	11a 370	Tyr	Asp	Asn	Gly	Tie 375
Lys	Phe	Ala	Fhe	Tł.r 360	Phe	Glu	Leu	Arg	Asp 585	Thr	Gly	Thr	Tyr	egy.
Fhe	Leu	Leu	Fro	Ala 395	Asn	Gln	Ile	lle	F'rc 400	Th.r	Alâ	Glu	Glu	Thr 405
Trp	Leu	Gly	Leu	Lуs 410	Thr	Ile	Met	Glu	His 415	Val	Ara	Asp	Asn	Leu 420

Tyr

<sup>+210 + 235</sup> +211 + 1743 +217 + 18A +213 - Homo papieno

२२ (वर्षे कृष्य) वृक्ष्यत्ववृक्ष्माः वृक्ष्यवृक्षय्ववृक्षयः प्रकारः शतक्षयः विकास्यापाः हिन् tari bolaala figikatorta kotttataga igtartoritii otyttigirooti 10° ut rigoroca, archaetyty tyteologyd chafyd wil agtycathol lib cocaecotto ofocaeaaig agoacocctg cofcaciigt gtattoccth 200 addapoquet figeoticog estatacede aquetquitt iggagadene 250 gantragaan atottettet eccetytyay tytetecaet teectyyeea 300 tgetatadan tegggyadaa teagtaaca agaabaagan toteeagggo 350 ctgggottca acctdadaca cadacagag totgodatge accagggett 400. coagcacoty uttractous tyaityttos bayraangas otgasottga 450 agatyygaag tgccctctto gtcaagaagg agctgcagct gcaggcaaat 500 ttottgggon atgtomagag gotgtatgaa goagaagtot titotmoaga 550 tttotobaac cootchatty occaggogay yatbaacago catgtgaaaa 600 agaayanoca agggaaqitt gtajanataa teelahunct tqachttetq 650acggoratgg tictggigaa toacarttic titaaagcca agiqqgaqaa 700gosstitean ettymatata emagamagam etteesätte etyytyyyny  ${\cal P}(0)$ agexyytean tytychayte cecatiyatyo accayaaaya qoaytteyet 800 tttjjjgtgg atamajaget gaastgettt gtgetgeaga tggattacaa 850 gggagatged gtggestidt tigtenteed tagnaagggd aagatgaggd 900 aactygaaca ggcctigtca gecaguacac tgalaaagtg gagccactca 950 ctoragaaaa ggtggataga ggtgtfcatc cocagatttt ccatttctgc 1000 ctootacaat otggaaacca tootooogaa gatgggcato caaaatgcot 1050 ttgacaaaaa tgctgatttt totggaattg caaagagaga ctccctgcag 1100 gtttetäääg caacccacaa ggetgtuetg gatgteagtg aagagggeae 1150 tgaqqonana qoaqntanna onachuaqti catuqtniga togaaqqati 120%. gtodstetta ettometuto feettvaafa ggadetfoot datgatgaft 1210. acawatawan dowongacyn tattofotti otannyawan ingwwaato: 1300 nachaaatho taggtoogaa arggootgtt aachdargdo acartgotaa 1350 tyma aasbaa lataamsaann alatooctot thotyti mig laggdigoain 1476 fida ininadt iddagiftudat filgstodinag odafidina fili filosaddiffic 145

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## <400> 236

Met Ala	Ser Tyr	Leu T	Tyr Gly	Val Te	u Phe	Ala	Val	Gly	Leu	$C_T^*s$
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Ala Pro Ile Tyr Cys Val Ser Pro Ala Asn Ala Pro Ser Ala Tyr 
$$\pm 30$$
  $\pm 25$ 

Fro Ard Pro Ser Sor Thr Lys Ser Thr Pro Ala Ser Gln Val Tyr 
$$^{35}$$

Ser Leu Asn Thr Asp Phe Ala Phe Arg Leu Tyr Arg Arg Leu Val 
$$\pm 0$$

Leu Glu Thr Pro Ser Gln Asn Ile Fhe Phe Ser Pro Val Ser Val
$$_{\rm PS}$$

Ser Thr Ser Leu A.a Met Leu Ser Leu Gly Ala His Ser Val Thr 
$$80$$
  $90$ 

Leu Fhe Val Lys Lys Glu Leu Gl  
n Leu Gl  
n Ala Asn Fhe Leu Gly 140 
$$$160\,$$

letion: The Ala Met Mal Jew Wal Ach His Ile The The Lym Ala

.. · r 21. lys Trp Glu Lys Fr: Phe His Lou Olo Tyr Thr Arg Lys Abn Fhe irs the Leu Val Gly Glu Gln Val Thr Val Glm Val Fro Met Met His Gln Lys Glu Gln Ehe Ala Ehe Gly Val Asp Thr Glu Lea Asn Cys Fhe Val Leu Gin Met Asp Tyr Lys Gly Asp Ala Val Ala Phe Pho Val Leu Pro Ger Lys Gly Lys Met Ary Gln Leu Glu Gln Ala 1,3,1 Leu Ser Ala Arg Thi Leu Ile Lys Trp Cer His Ser Leu Gln Lys (16.5) Arg Trp Ile Glu Val Phe Ile Pro Arg Phe Ser Ile Ser Ala Ser 310 Tyr Asn Leu Glu Thr Ile Leu Fro Lys Met Gly Ile Gln Asn Ala Phe Asp Lys Asm Ala Asp Phe Ser Gly Ile Ala Lys Arg Asp Ser Lou Gin Val Ser Lys Ala Thr His Lys Ala Val Leu Asp Val Cer Glu Glu Gly Thr Glu Ala Thr Ala Ala Thr Thr Thr Lys Fhe Ile 370 Val Arg Ser Lys Asp Gly Pro Ser Tyr Phe Thr Val Ser Phe Ash 380 384 Ard Thr Phe Leu Met Met Ile Thr Asn Lyc Ala Thr Asp Gly Ile 395 400

Leu Phe Leu Gly Ly: Val Glu Asn Fro Thr Lys Ser

<210> .37

4211 - 23

KRIZV DNA

Artificial

7.20>

FULL Artificial Sequence

<2.12 · 1-23</p>

KLERY Syntheric construct.

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⊕.l< Artificial
~24! - Artificial Sequence
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 323 Synthetic construct.
*1+1+ 33A
  ntig tytt ggedtetgtu nteesaacea tgewaggaea gugingu 47
-1.1.11
- Cl - Artificial Sequence
 UNIZ + 1-U4
1.20 Synthetic construct.
1400 - 239
 imantugggg totocaaaac dage 24
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-::.....NA
 The Artificial
WITH Artificial Sequence
*.... 1-24
C. 23 - Synthetic construct.
-(400) + 1400
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1.10 - 741
1.11 48
 . ... I NA
1.13 Artificial
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1..1 * Artificial Sequence
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1711> 1436
*2112 * DNA
·213 · Homo sariens
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ggtbagcata gtbabbaact otgagttoba tacaabbtob agtgggatba [90]
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ctgggtosag tgtgacstcc agtggagcca gcactgscac caactotgag 900.
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otgagtocag nacganotoc agtggggcca gcacagocac caactotgag 1150
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<4000-243

Met Lys Met 3ln Lys Gly Asn Val Leu Leu Met Fhe Gly Leu Leu  $1 \ 5 \ 10 \ 15$ 

Jeu His Leu Glu Ala Ala Thr Asn Ser Asn Glu Thr Ser Thr Cer 20 25 30

Ala Asn Thr Gly Ser Ser Val Ile Ser Ser Gly Ala Ser Thr Ala 35 40 45

Thr Asn Cer Gly Ser Ser Wal Thr Ser Der Gly Wal Ser Thr Ala 50

The See Gly Ser Ser Wal The See Ash Sly Wal See Sle Wal

KC10x 243

<sup>4...11, 596</sup> 

<sup>1.1 ·</sup> PFT

<sup>13.</sup> Homo sapiens

The Adm. Ser Blo He His The Thr Ser Ser Bly Ile Ser Thr Ala The Asi Ser Glu Phe Ser Thr Ala Ser Ser Bly Ile Ser Ile Ala The Ash Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala Thr Asn Ser Glu Ser Ser Thr Pro Ser Ser Gly Ala Ser Thr Val The Ash Ser Gly Ser Ser Val Thr Ser Ser Gly Ala Ser Thr Ala Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Arg Ala Ser Thr Ala Thr Ash Ser Glu Sor Ser Thr Leu Sor Ser Gly Ala Ser Thr Ala Thr Asn Ser Asp S⊷r Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala Thr Ash Ser Glu 30r Ser Thr Thr Sor 30r Gly Ala Ser Thr Ala .. 10 2+5 Thr Ash Ser Glu Ser Ser Thr Val Ser Ser Arg Ala Ser Thr Ala Thr Asn Ser Glu Jer Ser Thr Thr Ser Jer Gly Ala Ser Thr Ala Thr Asn Ser Glu 3er Arg Thr Thr Ser Asn Gly Ala Gly Thr Ala Thr Asn Ser Glu Bor Ser Thr Thr Sor Bor Gly Ala Ser Thr Ala Thr Asn Ser Asp Ser Ser Thr Val Ser Ser Sly Ala Ser Thr Ala Thr Asn Ser Glu For Ser Thr Thr Ser Cor Gly Ala Ser Thr Ala Thr Asn Ser Glu Fer Ser Thr Thr Ser Ber Gly Ala Ser Thr Ala ₹10-Thr Asn Ser Asp Cer Ser Thr Thr Ser Ser Gly Ala Gly Thr Ala :.0 Thr Ash Ser Glu Ser Ser Thr Val Ser Ser Gly Ile Ser Thr Val Thr Act Ser Glu Ger Cer Thr Pro Ser Cer Gly Ala Ash Thr Ala The Acr Ser Clo Con Nor The The Ser Cer Guy Ala Ash The Ala

77.5 KDO 575

Fig. Act. Ser Sin Ser Ser Thr Val Ser Ser Sly Ala Ser Thr Ala 380 - 385

The Ash Cer Glu Sor Ser Thr Thr Ser Ser Gly Val Sor Thr Ata 3.65 -4.00

The Ass. Ser Asp Ser Ser Thr Thr Ser Ser Glu Ala Ser Thr Ala 4.05 -4.5

The Asm Ser Glu Sor Ser Thr Val Ser Ser Gly Ile Ser Thr Val 440 446

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Thr Asn Ser Gly Ser Ser Val Thr Ser Ala Gly Ser Gly Thr Ala 400 40

Ala Leu Thr Gly Met His Thr Thr Ser His Ser Ala Ser Thr Ala 485

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The Leu Ile Thr Leu Val Ser Val Val Ala Ala Val Gly Leu Fhe 515  $\phantom{0}$  5.6  $\phantom{0}$ 

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Thr Phe Asn Thr Ala Val Tyr His Pro His Gly Leu Asn His Gly 545 556

Leu Gly Fro Gly Pro Gly Gly Asn His Gly Ala Pro His Arg Pro 560 50

Arg Trp Ser Pro Asn Trp Phe Trp Arg Arg Pro Val Ser Ser Ile 575 586

Ala Met Glu Met Ser Gly Arg Asn Ser Gly Pro 590 595

<sup>7.,10 - 244</sup> 

<sup>1311 - 26</sup> 

<sup>1/12 +</sup> PNA

<sup>.</sup>ld - Arrificial

<sup>· 220 ·</sup> 

rukl - Artificial Sequence

<sup>+122 + 1-26</sup> 

<sup>- 100 ...44</sup> 

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410 - 246
-.111 - 48
<./12% [NA
'13' Artificial
1220
3312 Artificial Sequence
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1.23: Synthetic construct.
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7.12 DNA
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- +213> Homo sapiens
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- Tourish Lys Dear Gly Gln Gly Alb His His Ala Ala Gly Gln Ala 173 - 174

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*. 21 - Artificial Sequence
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- 17 - 178
- 210 - Homo Wag Lebe
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<sup>&</sup>lt;211 / 837

<sup>&</sup>lt;212> FRT

<sup>&</sup>lt;214/ Home Papiers

<sup>&</sup>lt;400> 253

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Met Cys Thr Leu Phe Val Leu Ala Val Leu Leu Fro Val Leu Fhe 725

bou Lou Tyr Arg His Arg Ash Ser Met Lys Val The Lou Lys Gla

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C. 21. Artificial Sequence

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- 213 Artificial
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x221 Artificial Sequence
x222 1-18
x25 Synthetic construct.
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strontgest flagm magal attitistan attenmadas flagmagamt 40%. азыктакдааа эзэ 40со 4.2101 260 <211 / 902 <2125 FRT <0135 Hamo sapiens <400≥ 260 Met Ala Ala Arg Gly Arg Arg Ala Trp Leu Ser Val Leu Leu Gly Teu Val Leu Gly Fne Val Leu Ala Ser Arg Leu Val Leu Fro Arg Ala Ser Glu Leu Lys Arg Ala Gly Fro Arg Arg Arg Ala Ser Pro Glu Gly Cys Arg Ser Gly Gln Ala Ala Ala Ser Gln Ala Gly Gly Ala Arg Gly Asp Ala Arg Gly Ala Gln Leu Trp Pro Pro Gly Ser App Pro Asp Gly Gly Pro Arg Asp Arg Ash Phe Leu Phe Val Gry Val Met Thr Ala Gln Lys Tyr Leu Gln Thr Arg Ala Val Ala Ala Tyr Arg Thr Trp Jor Lys Thr Ile Pro Gly Lys Val Gln Fhe Phe 115 110 Ser Ser Glu Gly Ser Asp Thr Ser Val Pro Ile Pro Val Val Pro 1.5 130 Lou Arg Gly Val Amp Asp Ser Tyr Pro Pro Gln Lys Lys Ser Phe Met Met Leu Lys Tyr Met His Asp His Tyr Leu Asp Lys Tyr Glu 15,5 Trp Fhe Met Arg Ala Asp Asp Asp Val Tyr Ile Lys Gl; Asp Arg Leu Glu Asn Phe Leu Arg Ser Leu Asn Ser Ser Glu Pro Leu Phe Leu Gly Gln Thr Gly Leu Gly Thr Thr Glu Glu Met Gly Lys Leu Ala Leu Glu Ero Gly Glu Ash Phe Cys Med Gly Gly Pro Gly Val The Met Ser Ari 310 Val Leo Arg Ang Met Val Erc His Ile Gly

Typ Leu Arr flu Met Tyr Thr Thr His Olu Asp Val Glu Val 145 May Ari Mys Mal Arg Arg Ehe Ala Gly Mal Glm Mys Mal Trp Ser Tyr Glu Met Arg Glu Leu Phe Tyr Glu Asu Tyr Glu Glu Asu Lys Lys Gly Tyr Ile Arg Asp Leu His Asn Ser Lys Ile His Gln Ala Ile Thr Leu His Pro Asn Lys Asn Fro Fro Tyr Gln Tyr Arg Leu 310 His for Tyr Met Lau Ser Arg Lys He Bor Glu Leu Arg His Ara Thr Ile Glm Leu His Arg Glu Ile Val Leu Met Ser Lys Tyr Ser 310 Asn Thr Glu Ile His Lys Glu Asp Leu Gln Leu Gly Ile Pro Pro Ser Pho Met Arg Fne Gln Pro Arg Gln Arg Glu Glu Ile Leu Glu Trp Glu Pho Leu Thr Gly Lys Tyr Leu Tyr Ser Ala Val Asp Gl; Gln Pro Pro Arg Arg Gly Met Asp Ser Ala Gln Arg Glu Ala Let Asp Asp Ile Val Met Gln Val Met Glu Met Ile Asn Ala Asn Ala Lys Thr Arg Gly Arg Ile Ile Asp Fhe Lys Glu Ile Gln Tyr Gly 430 Tyr Ard Arg Val Asn Fro Met Tyr Gly Ala Glu Tyr Ile Leu Asp Leu Leu Leu Teu Lys Lys His Lys Gly Lys Lys Met Thr Val Pro Val Arg Arg His Ala Tyr Leu Gln Gln Thr Fhe Ser Lys Ile Gln Pho Val Glu His Glu Glu Leu Asp Ala Gln Glu Leu Ala Lys Arg Ile Asn Glm Glu Ser Gly Ser Leu Cer Fhe Leu Ser Asn Ser len lyd lyd Ieu Mal Erd Ehe Gin len Erd Gly Ser Lys Ser Giu 815 His Lyn Nu Fro Lys Asy Lys Lys lie Ann lie Leu Ile Fro Leu

				634					Ę . Ę					540
2-r	-117	Arj	P:re	Asp 545	Met	ř:.0	Val	Arg	F:le 5 +0	Met	GlŢ	Asn	Fle	31u 555
Lys	Thr	Cys	Leu	Ile 561	Fro	Asn	Gln	Asn	V.11 555	Lys	Leu	Val	Val	Leu 570
Leu	Phe	Asr	Ser	Asp 575	Ser	Asn	Pro	Asp	Ljs 5wû	Ala	Lys	Gln	Val	G10 585
Leu	Met	Arg	Asp	Tyr 590	Arg	Ile	Lys	Tyr	Pro 545	Lys	Ala	Asp	Met	Gln h.m
Ile	Leu	Pro	Val	Se1 60%		Glu	Fhe	Ser	Arg 610	Alā	Leu	Ala	Leu	G1n 615
Val	Gly	Ser	Ser	61r: 630	Fhe	Asn	Asn	Glu	301 525	Leu	Leu	Phe	Ph⊕	Су.: 630
Asp	Val	Asp	Leu	Val 631	Fh€	Thr	Thr	Glu	Pho 640	Leu	Gln	Arg	Суз	Arq 645
Ala	Asn	Thr	Val	1011 54,0	Gly	Gln	Gln	Ile	Tyr Gus	Phe∙	Pro	Il÷	Il÷	Pra des0
Ser	Gln	Tyr	Asp	Fri Enf	Lys	lle	Val	Tyr	Ser 570	Gly	Lys	Val	Pro	4 / €.
Asp	Asn	His	Fhe	Aller glyrin	Fhe	Thr	Gln	Lys	Thr Sr5	Gly	Ph∈	Trp	Arg	A in Hin
Tyr	Gly	Phe	Gly	£ 40	Thr	cha	lle	Tyr	Lys 700	Glγ	Asp	Leu	Val	Ard 710
Val	Gly	Gly	Phe	Asr 710	Val	Ser	Ile	Gln	G17 715	'I'rp	Gly	Leu	Glu	Asp. 7,10
Val	Asp	Leu	Phe	Asr. 7115	Lys	Val	Val	Gln	Ala 7.0	Gly	Leu	Lys	Thr	Phe 735
Arg	Ser	Gln	Glu	Vai 740	Gly	Val	Val	His	Val 745	His	His	Pro	Val	Phe 750
Cys	Asp	Fro	Asn	Len 755	Asp	Fro	Lys	Gln	T;r 700	Lys	Met	Суѕ	Leu	G1;; 755
Ser	Lys	Ala	Ser	Thr 770	Tyr	Gly	Ser	Thr	G1n 75	Gln	Leu	Ala	Glu	Met 780
Trp	Leu	Glu	Lys	Asn 785	Asp	Fro	Cer	Tyr	30 Eer	Lys	Ser	Ser	Asn	Asn 795
ASD	Gly	Ser	Val	Arq so(	Thr	Ala								

/210 × 2€1
/211 × 34

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+ 214 + 1NA
+ M3 > Artificial
 208
.32.1 1-24
-1... Synthetia construct.
(49) - 261
 quincoactae ggggtgtgga egae 24
 .110 \times 26.3
<.111 + 24
€JIJ - IIIA
< '13 Artificial
< 132 Y
1311 - Artificial Sequence
722. 1-14
4.23. Synthetic construct.
34 HJC 34 J
 triwatitot recytyytyc ecag 24
1 10 203
111. 40
UH.: DDĀ
TULE Artificial
::: /
'...D Artificial Sequence
T. . Synthetic construct.
(400b) 2+5s
 ccaqaaqaag teetteatga tgeteaagta catgeacqae cactae 46
%:105 264
%:105 1419
%:11:** DNA
<213 Hemo sapiens
44(00) 264
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 agtitiagag aanotagtac qaagtgtrop ototgoggag ecagqtogtg 300
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agaaaaaato taastofora aaaratytti afforatayi atcaaaugya <sup>lo</sup>0

traasitta uggagitadi tarahatdga di mottosa otgadistda 400.

ndittraann aar ometoe ut saasaak haksanttto hopfackisas 👯 potticacabo ugadatagua salmasaan acang maasi tabibbaatti 1400 igulogatou uaccadacad igitticoati uittiucatg cegajgaako 550 ttatattgaa aatqaagago caqaqooagu qooqqaqooa qotgoaaaac 600 Mactgagge accaagaata ttgodagttu ttactgaato atctabaagt 650 restatotta esteatacaa uteacetote secaetttäg ataagauess 700 tqueattgag atototabag aatoagaaga tgttrotoag ototoaggtg 750 aaastungat agaaaaasse maaqautttu qaaaqsacce agagagttig 800 aataatgatq acatittiaa aaaaatttta gatattaatt cacaagtqoa 850. acaggeactt ettäytyaca eeageaagee ageatataya gaagatatty 9000 aagoototaa agatoacota aaadgaagoo fitgototago agoagbagoa 950. gaabataaat taaaaabaat qtataagtod bagtfattgo bagtaggabg 1000 aacaaqtaat aasattoato acategaaac tottattaac atgetotota 1050 affictagato taaactotat gaatatttag atattaaatg tgttccacca 1100 gagatgagay waxaaqotdo tabaqtafto watabattaa waxataturg 1110. tagatokagg agagtoacag cottattaaa agtttattaa acaataafat 1 x(t)aaaaatttta aacstactty atattocata araaagetya titaagraaa 1250 stycattitt toamaggaga aataatmata tiogtaatti caaaagtigt 1500 athaaaaatat titotattyt ayttoäaaty tyocaacato titatytyto 1350atototitato aacaatttiid atatocarta aaaaeetaat tiaaaataaa 1400 at\* tagtto aggaaaaaa 1419

<sup>433105 265</sup> 

<sup>-0.1112 350</sup> 

<sup>&</sup>lt;21.5 PRT

<sup>&</sup>lt;213> Homo sapiens

<sup>0400&</sup>gt; 265

Met Lys Fro Leu Vâl Leu Leu Val Ala Leu Leu Leu Trp Pro $\widetilde{\mathcal{S}}\mathrm{er}$  1 5 10 15

Yer Val Fro Ala Tyr Fro Sør He Thr Val Thr Fro Asp Glu Glu 20 15 30

Cin Ash Leu Ash His Tyr Ile Glin Val Leu Glin Ash Leo Val Arg -49

och Mal Er Ger Gly Glu Erc Aly Ara Glu Lyz Lyz Ger Ash Ser

11.	Lys	His	∵:1	Ty:	Ser	110	Āla	? -1	Lys	417	7+1	4:55	The	Lyc
Glu	Leu	Val	Thr	His	Glÿ	Asp	Ala	Ser	Thr	(311)	Asn	Asp	Val	Led 90
Thr	Asn	Fro	Il∈	Sei us	Glu	Glu	Thi	Thr	The	Fhe	Fre	Thr	Gly	315.
Fhe	Thr	Fro	Glu	11 <i>e</i> 110	Gly	Lys	Lys	Lys	Hi.: 115	Thr	ទាប	Ser	Thr	Pr5
Phe	Trp	Ser	Ile	125	Pro	Asn	Asn	Val	3-3:1 1 < 1		Val	ľe.i	His	Ala 135
Glu	Glu	Pro	Tyr	Ile 14.	Glu	Asn	Glu	Glu	(1) (1)		Fro	Glu	Fro	61. 150
Pro	Ala	Ala	Lys	31r. 195	Thr	Glu	Ala	Pro	Arq Lou	Met	I.eu	Pro	Val	Val 165
Thr	Glu	Ser	Ser	Thr 170	Ser	Pro	Tyr	Val	7117 174	Ser	Tyr	Lys	Ser	Pro 180
Val	Thr	Thr	Leu	Asp 185	Lys	Ser	Thr	Gly	115	Glu	He	Ser	Thr	G. u 195
Ser	Glu	Asp	Val	Pro Loo	Glh	1.001	Ser	Gly	13, 1	Thr	Ala	Ile	Glu	lys 210
Pro	Glu	Glu	Phe	317	Lys	His	Pro	Glu	36r 31. 9	Trp	Asn	Asn	Asp	Asp 225
He	Leu	Lys	Lys	116 230	Leu	Asp	Ile	Asn	Shor Mar	Gln	Val	Gln	Gln	A i a . 140
Leu	Leu	Ser	Asp	Thr 45	Ser	Asn	Pro	Ala	Tyr	Arg	Glu	Asp	He	Gìu 255
Ala	Ser	Lys	Asp	H15 , 60	Leu	Lys	Ara	Ser	Len . rf	Ala	Leu	Ala	Ala	A:a 0
Ala	Glu	His	Lys	Leu : 75	Lys	Thr	Met	Tyr	ings The	Ser	Gln	I.eu	1.6-11	I ro 285
Yal	Gly	Arg	Thr	Cor : 30	Astı	I.ys	Ile	Asp	App 195	Ile	Glu	Thr	Val	11e 300
Asn	Met	Leu	Суѕ	Asn POE	Ser	Arg	Ser	Lys	leu 130	Tyr	Glu	Tyr	I.F±U	Asp 315
He	Lys	Cys	Val	Pro Page	Fr:	Glu	Met	Arg	61 u -2.4	L','S	Ala	Ala	Thr	Val
15.6	Art.	Thr	160	Lys	A.V.	Met	278	Arq	Cer	Arı	Arg	Val	Thr	Ala

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<211 + 2403
<212 > DNA
+213 + Homo sapiens

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 agtaggggth treatqqaet atdaggqtlyg gaebatoton ffottcaats 1409
 caaatga\phica gt\phiocttatt tatacectge t\chi_{0}eatgt\gamma_{0} gtttgaa\phigc 14\pi \Phi
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 topeatatto atatutopag tytoptqygy atgagapaga gaagappotg 1550
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 casaacotoo caggetooto atitgotayt cacggacagt qattootgoo 190^{lpha}
 toacaqqtqa aqattaaaqa qabaabqaat qtraatbatq bitqdaqqtt 1960
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 utawayagga ggtaggatti tinasigati siatawagoso wagattassi (150
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наа 2403
3d:10 + 267
0.111 - 466
4..112 PRT
-213 - Home sapiens
<400. 26T
Met Ala The Val Leu Ile Leu Val Leu Cer Fhe Tyr Glu Leu Val
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Cor Gly Win Trr Gin Val Thr Giv Frt Gly Lys The Val Gin Ala

				25										• 0
I.•-!1	Val	31,	Glu	A/p 45	Alā	Val	File	Tim	្វាទ វភ្	.ler	1. 11	Fhe	iri	⊈lu 45
Thr	Ser	Ala	G1;;	Ala	Met	Glu	Val	Arş	Fine 55	Fhe	Arg	Asn	Gln	Fhe • U
His	Ala	Val	Val	His 65	Leu	T'''r	Arg	Asp	31; 70	31u	Asp	Trp	Glu	Ser 75
Lys	Gln	Met	Pro	Glin An	Tyr	Arg	Gly	Arg	Thr 55	Glu	Fhe	Val	Lys	48p 90
Ser	Ile	Ala	Gly	Gly	Arg	Val	Ser	Leu	Arq 100	Leu	L;;s	Asn	Ile	Thr 105
Pro	Şer	Asp	Ile	(3137 1111	Leu	Tyr	Gly	Cys	T:p	Fh€	Ser	Ser	Gln	110 127
Tyr	Asp	Glu	Glu	Ala 115	Thr	Trp	Glu	Leu	$A \eta \oplus 1 + \Pi$	Val	Ala	Ala	Leu	G17 135
Ser	Leu	Pro	Leu	Ile 140	Ser	Ile	Val	Gly	Tyr 145	Val	Asp	Gly	Gly	11e 150
Gln	Leu	Leu	Cys	Leu 196	Ser	Ser	Gly	Trp	Phe 1+0	Fro	Gln	Pro	Thr	Ala 165
Lys	Trp	Lys	317	Pro 170	Gln	Gly	Gli	Asp	(3-1) 1 - 1	Ser	S⊬r	Asp	Ser	Arg 180
Ala	Asn	Ala	Asp	Gly 185	Tyr	Ser	Leu	Tyr	A/F)	Val	Glu	Ile	Ser	Ile 195
Ile	Val	Gln	Glu	Asn 200	Ala	Gly	Ser	Ile	Leu	Cys	Ser	Ile	His	Leu 310
Ala	Glu	Gln	Ser	H18	Glu	Val	Glu	Ser	1:75 .:. (:	Val	Leu	Ile	СЈŻ	Glu .:25
Thr	Fhe	Phe	Gln	Pro .30	Ser	Pro	Trp	Arg	Letu 235	Ala	Ser	Ile		Leu . 40
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Ile	Val	Fhe	Fhe	Lys 160	Ser	Lys	G17	Lys	116 165	Gln	Ala	G∶u	Leu	72. 70
Trp	Arg	Arg	Lys	His U75	Gly	Gln	Ala	Glu	្តិកុធ ខ្ពស់	Arg	Asp	Ala	Arg	lays 285
His	Ala	Val	Glu	Val 290	Thr	Leu	Asp	Fire	Clu 19°	Thr	Ala	His	Fro	1.78 200
[en]	15	··	$\mathcal{L} \cap \mathbf{r}$	Asp 305	Len	Lys	T:.r	Vál	Thr	His	Āra	$L_{J}^{*}$	Ă. a	Err 911

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Bln Gln Val Ero His Sor Gln Lys Arn Ehe Thr Arn Lys Ser Val
                + 2 f
Val Ala Ser Gln Gly Phe Glr. Ala Gly Aru His Tyr Trp Glu Val
Asp Val Gly Gln Asn Val Gly Trp Tyr Val Gly Val Cys Arg Asp
Asp Val Asp Arg Gly Lys Asn Asn Val Thr Leu Ser Pro Asn Asn
Gly Tyr Trp Val Leu Arg Leu Thr Thr Glu His Leu Tyr Ene Thr
Fne Ash Fro His Fne Ile Ser Leu Fro Fro Ser Thr Pro Pro Thr
Arg Val Gly Val Phe Leu Asp Tyr Glu Gly Gly Thr Ile Ser Phe
                410
The Ash Thr Ash Asp Gln Ser Leu Ile Tyr Thr Leu Leu Thr Cys
                                     430
Gln Phe Glu Gly Leu Leu Arg Pro Tyr Ile Gln His Ala Met Tyr
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Gly
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 $4.210 \pm 0.68$ 

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<213 - Homo sapiens

4400 - . 68

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otcastrigt taaaattasa araastoader agacagaaan agacagetat 55%
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thdadaaasa agnuaasata tahorthahn hteathtosa aasaachash 1951
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- Asr Gln Lys Lys Thr Tyr Asn Tyr Tyr Ser Thr Leu Ser Phe Thr -60
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- Gly Pro Pro Lys Val Asp Pro His Ser Val Lys IIe Lys Lys Iie 165 160
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Trr Leu Val Çer Ala Ala His Cys Phe Thr Thr Tyr Lys Ash Fr
230 .41
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Phe Gly Ala Leu Lyz Asn Asp Gly Tyr Ser Gln Asn His Leu Ard
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Ger Leu Glu Gly Lys Thr Asp Ala Cys Gln Gly Asp Ser Gly Gly
                                      370
Pro Leu Val Ser Ser Asp Ala Arg Asp Ile Trp Tyr Leu Ala Gly
                31:0
Ile Val Ser Trp Gly Asp Glu Cys Ala Lys Pro Asn Lys Pro Gly
Val Tyr Thr Arg Val Thr Ala Leu Arg Asp Trp Ile Thr Ser Lys
                                     415
```

Thr Gly Ile

<210 ⋅ 270

<.111 · 1170

<0:12 + DNA</p> <213 Homo sapiens

<400 - 270 utcyaaggtt ataaaagett ccagceaaac ggcattgaag ttgaagatac 50 aacctgacag cacagootya gatottgggg atocctcago (taacaccca 10) hagacgtbag otggtggatt chogctgbat baaggbriad hhantgtotb 150 ratgetgggn totecotype thotgtggot cotygenuta acothettyy 200

ticochagado icadocatig deconficaag wittigaaya adagdaggna 2<sup>co</sup>

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gatdayacty admodycyto googoottty deggetyted estgegadta 300
ngabeactgo spacauptyc aggtgocotg caaggagota bagagggtbg 350
ggorggogo stgratatad beaggabtet beaggboogd beagbogodb 400
gacoogrege geatgygaga agtgogoatt goggoogaag agggoogogo 450
agtigatecas tigatatacon cottotococ agticomocae tilotagetae 500
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acticiadot gogogatogo tagagactado equaçurado equeçõesça 850
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godwoggogg agtcatggtt otcaggabtg agbgettgtt taggtboggt 1050
Acttqqcqct ttqtttcctq qctqaqqtct qqqaaqqaat aqaaaqqqqc 1100
occopaatttt titttaagog gocagataat aaataatgia accittigogg 1150
ttadadadaa aadaadadaa 1170
```

- $\pm .210 \times .771$
- 111-38
- +212 + PRT
- +213 Homo sapiens

## <400 - 271

Met Leu Gly Ser Pro Cys Leu Leu Trp Leu Leu Ala Val Thr Phe 1 5 10 15

Leu Val Pro Arg Ala Gl<br/>n Pro Leu Ala Pro Gl<br/>n Asp Phe Glu Glu 25 30

Glu Glu Ala Asp Glu Thr Glu Thr Ala Trp Pro Pro Leu Pro Ala 35 40 40

Val Pro Cys Asp Tyr Asp His Cys Arg His Leu Gln Val Pro Cys 50 55

Lys Slu Leu Gln Arg Val Gly Pro Ala Ala Cys Leu Cys Fro Gly 65

```
        Tail And III Als Als Als Glu Glu Glu Gly Ard Als III Als Ero Fro And Met Gly Glu 30

        Tail And III Als Als Als Glu Glu Glu Gly Ard Als III Als Trp Gys 105

        Als Fro Fro Fro Fro III Als Als Glu Glu Gly Ard Als III Evu Leu Leu Trp Axp 115

        Als Fro Fro Fro Fro III Als Als Glu Lys Gly Fro III Evu Leu Leu Leu Trp Axp 115

        Gly Ser Glu Als Als Glu Lys Gly Leu Lys Pro III Evu Asn Als Thr Val 135

        Arg Arg Als Glu Lys Gly Leu Lys Pro III Evu Asn Als Trp Val 145

        Val Cys Val Val Als Als Als Als Asn Glu Als Gly Als Ser Arg Val Pro III Evu 145

        Gly Pro Cys Ser Arg Leu Als Val Pro Pro Asn Pro Arg Thr Leu 145

        Val His Als Als Als Cly Val Gly Val Gly Thr Als Leu Als Leu Leu 3-47

        Cys Als Als Als Leu Val Trp His Pro Cys Leu Arg Asp Arg Trp Gly 2.55
```

Cys Pro Arg Arg Ala Ala Ala Arg Ala Ala Gly Ala Leu

230

<400> 272

agagaaagaa gegteteeag etgaageeaa tgeageeete eggeteteeg 50 egaagaagtt beetgeeseg atgageese geegtgegte oocgastate 100 escaaggeggg egtggggeae egggeeeage geegaagate getgeegttt 150 tgedettggg agtaggatgt ggtgaaagga tggggettet eeettaeggg 200 getracaatg geeagaagaag atteegtgaa gtgretgege tgeotgetet 250 acgeedteaa tetgetett tggttaatgt eeareagtgt gttggeagtt 300 tetgettgga tgagggaeta eetaaataat gtteteactt taactgeaga 350 aangaagggta gaggaageag teattttgae ttaettteet gtggtteafe 400 eggfearsar tgetgttse tgttteetta teaftatgg gatgttagga 450 tarrutsaa enstgaaaa gaatetgttg ett troat ggtaettigg 5

<sup>372 €310</sup> 

H.::11: 2397

HOLLO DNA

<sup>-21 &</sup>lt;> Homo sapiens

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eastin not gloatititet glatigaaret gwelligtigge alltagaeat (50)
argaalaysa acttafystt oraştacaat üştləqatat götcərttiş (i.e.
a madosayya itgasabatta itggattasor aqatatoqqi gqottmotoa \delta^{CO}
tunttygaät itiitticaga gagauttiää yigotyigga giagiatati 7000
scaletyacty gttggaaatg acagagatyg actygoodoo agattootgo 750.
nutgitagag aattoobagg atgitobaga baggobbabb aggaagatoi 870
Mutjacett tatelagaga gttytygyla gladatytat teettittiga 850.
yaqqaaccaa acaabtgcag qigotgagyt tiotgggaat cicbattqyg (44).
gtgacacada footggodat gattotoaco attactotgo tetggiotet 950
ghattatgat agaagggago ntgggacaga ccaaatgatg toottgaaga 1000
atgacaacto toagoacotg toatgtooot cagtagaact gttgaaacca 1050\,
Agoctytoaa gaatottiga acacabatob atyybaaaca gotttaatao 1100-
acactttgag atggaggagt tataaaaaaqa aatgtbabag aagaaaabba 1150-
casacttgtt trattggact tgtgaattht tgagtacata ctatgtgttt 1/00-
cagamatatg tagamatasa aatgitigoda taamatmada ootaagomta 1250
factattota hydittaaaa igaggatgga aaagtitoat gidataagto 1809.
accacctgga caataattga tyoocttaaa atyotgaaga cagatytoat 1\,\%0
accoactgtg tagoctgtgt atgactttta otgaacacag ttatgttttg 1400
aggoagoatg gtttgattag catttcogca tocatgoaaa ogagtcacat 1450^{\circ}
atggtgggae tggagocata gtaaaggttg atttacttot accaactagt 1500
atataaagta ctaa:taaat gotaacatag gaagttagaa aatactaata 1000
actititatia eteagogato tattettetg atgetasata aattatatat 1600
cagaaaactt toaatattgg tgaotacota äätgtgattt ttgotggtta 1650.
ctaawatatt ottaccaptt awaagaybaa gotawcacat tgtottawgo 1700
fgatcaggga tittitgtat ataagtoigi gitaaatoig tataattoag 1750
togatttoag itbigataat gitaayaala accattaiga aaaggaaaat 1800.
ffgtootgta tagoatoatt atttttagoo tttootgtta ataaagottt 1850.
sittati irit inotigydohia tattahanat ataashijitta tiltadatact 1900-
tabona htaa itti waaaat itaboa wixig atahataqqa atkahtahtii 1950.
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erangtaut inggrotita iyangtatta atangaalat tidiacataa 2000 miautigam koagadagga etturatget uttittetee Jadatgaaga 2051 erotittida omotadasas tittidadada gottatitti gestisteed 2100 0.11. ptpatagaad aatagtitoo aagticaatat aaattotaca gadaatagtig itottittot opagaasaat gottigtigaga atoattisaaa batigtigabaa 2200 tttagagatt ettigittita itteaetgat taatataetg iggeaaatta 2250 Jacagattat taaattiitt tacaagagta tagtatatti attigaaatg 2300 agaaaagtyo attitabigi attiigigia tiityittai tiotoagaat 235) atugaaagaa aattaaaatg tgtcaataaa tattttctag agagtaa 2397

## <400: 273

Met Ala Arg Glu Asp Ser Val Lys Cys Leu Arg Cys Leu Leu Tyr

Ala Leu Asn Leu Leu Phe Trp Leu Met Ser Ile Ser Val Leu Ala

Va: Ser Ala Trp Met Arg Asp Tyr Leu Asn Asn Val Leu Thr Leu

Thr Ala Glu Thr Ard Val Glu Glu Ala Val Ile Leu Thr Tyr Fhe

Pro Val Val His Pro Val Met Ilo Ala Val Cys Cys Phe Leu Ilo

Ile Val Gly Met Lan Gly Tyr Cys Gly Thr Val Lys Arg Asn Low.

Lou Lou Lou Ala Try Tyr Phe Gly Ser Lou Lou Val Ile Phe Cy:

Val Glu Leu Ala Cys Gly Val Trp Thr Tyr Glu Gln Glu Leu Met

Val Fro Val Gln Trp Ser Asp Met Val Thr Leu Lys Ala Arg Met 130

Thr Ash Tyr Gly Leu Pro Ard Tyr Ard Trp Leu Thr His Ala Trp

Apr. The The Glu Arg Glu The Lys Cys Cys Gly Val Val Tyr The

The Aspetre Leu Slu Met The Slu Met Ase Tre Fro Fro Age Cer

<sup>&</sup>lt;210°+ 273

<sup>&</sup>lt;211: 305 <212: PRT

<sup>&</sup>lt;213 Homo sapiens

	100			175		180
Tys Cys Val	Arg Glu 16°	Fhe Fri	Gly Cys	Ser Lys 190	Gln Ala	His Glm 195
diu Asp Leu	Ser Asp	Leu Tyr	Gln Glu	Gly Cys 205	Gly Lys	Lys Met [10
Ty: Ser Phe	Leu Arg		Lys Gln	Leu Gln 220	Val Leu	Arg Phe
heu Gly Ile	Ser lle .30	Gly Val	Thr Gln	ile Leu 235	Ala Met	Ile Leu .40
Thr Ile Thr	Leu Leu .'45	Trp Ala	Leu Tyr	Tyr Asp 250	Arg Arg	Glu Pro
Gly Thr Asp	Gln Met . 60	Met Ser	Leu Lys	Asn Asp 165	Asn Ser	Gln Hiz 270
Leu Ser Cys	Pro Ser :75	Val Glu	Leu Leu	Lys Pro U80	Ser Lea	Ser Ard 285
lle Phe Glu	His Thr	Ser Met	Ala Asn	Jer Phe J95	Asn Thr	His Phe 300
Gra Mot Glu	Glu Leu 405					

3.105 . 74

4711/01/063

<21.2> DNA

\*Call3> Homo sapiens

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t na nadalyh tom ny myak a nazhrmata dinadatzizi atanazoaga (50)
acturbanga intogramasa penagarena gatorrumna habebalaga (kd)
навладоснаў двідост пусна ідпудняють ваютудують týtototnag ThD.
referengt effections totally out graggalagay cotgalagaed 800)
obnogtgigy igagiqqqqa agaqyostot giqqattoti qybotiqqqa 8500
ugt ragbato dagtadgada aabagdadit dtutggaggg agbatootgg 900.
acompacty gytectracy grayminact yetteagyaa acatacegat 950.
atgitemact ggaaggigeg ogsaggetem gasmanotgg gemgettede 1000
atorstoget gtogschaga toatoatoat tgaattoaan cocatgtach 1050.
commigacia tigacatogos intratquago tigoagittoso actoactito 110 (
floaggeaeag teaggeeeat etgtetgeee ttetttgatg aggageteae 1150
topagoraec coartetygu teattogatg gygetttaeg aageagaatg 120 \sigma
qaqqqaaqat qtotqacata ofgotgoaqq ogtoaqtoca qqtoattqab 1250
ngcabacggt gcantgcaga cgatgngtad bagggggaag tbaccgagaa 1300
matmatgtyt geaggeater egyaaggggy tytggaeaes tyesagggty 1350
amantqytyg qoonotgatq tabbaatotg ambagtggma tgtggtgggb 140%
atogitagot ggggotatgg otgogggggo oogagbagoo baggagtata 1450.
caccaaggte teagestate teaactggat stabaatgte tggaaggetg 1500
agetytaatg etgetgenee titgeagtye tyggageede titeetteety 155\%
cootgobhas otggggarod obsaaagtea gababagago aagagtboob 1600
tigggtacae nectotypec acagestoag cattistigg agcageaaag 1650.
ggootcaatt ootgtaagag accotogoag occagagggg occagagggaa 1700
greageagne etagetegge casaettggt geteesagea toosagggag 1750
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motttooda dactactyaa iggaagcagg otgtottgta amagoodaga 1850
t antgiggg niggagaga paangaaagg ginigogona goodigioog 1900
tittoaccea tooccaagoo tactagagoa agaaaccagt tgtaatataa 1950.
estanachan entactgiru utaigannas ogttachten tgingtbatt 2000.
griafra egy itatugores hartattasa gagytyngta aratifiltog wîsî
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- · .... 271
- · ...11 · 432
- · 212 > FRT
- +z13> Htmp sapiens
- · 400× 275
- Met Leu 3ln Asp Pro Asp Ser Asp 3ln Pro Leu Asn Ser Leu Asp 1 5 10
- Val Lys Fr: Leu Arg Lys Fro Arg Ile Fro Met Glu Thr Fhe Arg
- Lys Val Gly Ile Fro Iie Ile Ile Ala Lou Leu Ser Leu Ala Ser  $3^5$ .
- The The The Val Val Tal Leu The Lys Val The Leu Asp Lys Tyr  $\frac{c_1c_2}{c_2c_3}$
- Tyr Phe Leu Cys Gly Gln Pro Leu His Phe Ile Pro Arg Lys Gln  $\frac{1}{70}$
- Leu Cys Asp Gly Glu Leu Asp Cys Pro Leu Gly Glu Asp Glu Glu  $\frac{1}{800}$
- His Cys Val Lys Ser Phe Pro Glu Gly Fro Ala Val Ala Val Ara -95
- Let Der Lys Asp Art Ser Thr Let Glin Vil Leu Asp Ser Ala Ph: 110 110
- Gly Asn Trp Phe Ser Ala Cys Phe Asp Asn Phe Thr Glu Ala Leu 1.65 1.50
- The Gly Pro Asp Glt. Asp Leu Asp Val Val Glu He Thr Glu Ash 155 160 165
- Ser Gln Glu Leu Arg Met Arg Asn Ser Ser Gly Pro Cys Leu 3er 170
- Gly Cer Leu Val Ser Leu His Cys Leu Ala Cys Gly Lys Ser Leu 185 \$120\$
- Lys Thr Prc Ard Val Val Gly Gly Glu Glu Ala Ser Val Asp Jer 200 205 210
- Trp Fro Trp Olm Val Ser He Glm Tyr Amp Lys Glm His Val Cys 220 220
- Gly Gly Ser Ile Leu Asp Pro His Trp Val Leu Thr Ala Ala His 230 . 40
- Typ Ehe Ard Lys His Thr Asp Val Ehe Ash Trp Lys Val Arb Ala 248 700 255

- 31 : Our Asy Eys Lou Bly Ser the Fro Ser Leu Ala Val Ala Lys 200 255
- Il: 11e Ile Ile 31u Fhe Ash Fro Met Tyr Pro Lys Asp Ash Ash 275 280 280
- II) Ala Leu Met Lys Leu Gln Fhe Pro Leu Thr Phe Ser Gly Thr 2.70 2.75
- Va. Arg Fro Ile Cys Leu Pro Phe Fhe Asp Glu Glu Leu Thr Fro 305 310
- Al: Thr Fro Leu Tip Ile Ile Gly Trp Giy Fhe Thr Lys Gln Asn 3.00 3.25 3.30
- Gly Gly Lys Met Sor Asp Ile Leu Leu Gl<br/>n Ala Ser Val Gl<br/>n Val 340 \$345
- Il. Asp Ser Thr Arg Cys Asn Ala Asp Asp Ala Tyr Gln Gly Glu 300 395 60
- Va. Thr Glu Lys Met Met Cys Ala Gly Ile Pro Glu Gly Gly Val  $3\cdot 5$
- Asp Tor Cys Gln Gly Asp Ser Gly Gly Pro Leo Met Tyr Gln Ser 380
- Ası Gln Trp His Val Val Gly Ile Val Ser Trp Gly Tyr Gly Cys 305 400 405
- Gly Gty Frc Ser Thr Pro Gly Val Tyr Thr Lys Val Ser Ala Tyr 410 -415 -420
- Leu Asn Trp Ile Tyr Asn Val Trp Lys Ala Glu Leu 425 430
- 12111 276
- +12111+ 3143
- 1.1. DNA
- +21% Homo sapiens
- <4000 276
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- acgcaycygc atocccaggo tocagagoto cotygtgaca gtotgtggot 100
- gagdatgros otoccagodo tgggdotgga constiggago otoctgggdo 150
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- ggaggcgqgc aguddcccat gcccagggtc agatactatg caggggatga 250
- angtayagna offaqottof todaccagaa gggcotocag gattitgada 300
- ctotgothet usgragtgat agaaatasto totacgtaga agstogagaa 350
- geniti iidi Puttudatat iesagiatusa googfoodba oostaaadaa 400

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arrucaaygt hafggaggga aqaqqocdaa gobootttga boboyotbac 6v:
aadcatacgy otgtottggt gyatgygatg ototattotg gtactutgaa 700
concitesty ggeogregate scategigat yeyelelety ygateceage 75\%
ctiftootbaa waxogacaab ttootbogbt ggotgomtoa tgaogootbo 8000
ftt magnad od stodotto gadochygto gtotastict fottogagga 850.
garagemage gamittgast tetttgagag getesacasa tegegggtgg 90%
ctagagtoty caaqaatgab qtqqqqqqqq aaaaqctqot qbagaaqaaq 950
topaccapet teetgaagge eragetynto tynacceago byyggoaget 1000
donntthaad gtoatooged abgoggtoot getoeeeged gattethisea 10\% ).
caucticoca catolabgea glotteapet ebcaytygba yyttygegyy 1100
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ottatagggg cootgagadd aacdoodggd caggdagttg otdagtgggd 1250.
occidented atmaggeest gacciteming maggaesatt teetgatggm 1300
tuaghaagtig gtguggadge contgotigit gaaatorigge jitggagtata 10^{60}\,
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gggarnetga um migaaco tittgectoo tigtnigeeco eaacetgaac 1700
teetajaagn aggueataga gedigggaas eeagagtagg satgtgeeag 1750.
ingreseaig as rangados itropassica gageodoera caaat ratta 1800.
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riggasityy gygtototae pagtortony raactianaa tygoitiica 2000
tabootytya fotoofacty gyrgdalaw caggaccaga cobfggccct 2050
igationtyla otgyckymia tevcenymia deatytykay gteceghtia 2100
rcagadicad iggiggiges descriptera escageadic classigger 2050
Caphitytia etateactat estettigee tragtystit eaggasseet . Now
rateatorio giggostevo catigadado abioeggypi eggggeaagg 1750
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atgradagea grotgestes cotatgudae todottotae caagnahatd 2600.
agistishistaa dagggtigggg gotacocoda gadotgotiso tadastigata 2000-
ftgaagaado tggagaggat nottcayffn fggodattoo agggad noto (500)
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cagggytäät otgageotte tteact mit taecetaget gaececttea 3050
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agaga tigti tattittiat taaaaatata aggottaaaa aaa 3143.
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C::10> 277

<sup>2112 761</sup> 

blub FRT
213 + Himm marionn

Met Ala len Ern Ala Len bly Len Asp Ern Trp Cer Lou Len Gly Let The Let The 3ln Let Ieu Gln Lot Let Let Ert Thr Thr Thr Ala Gly Gly Gly Gly Gln Gly Fro Met Fro Ard Val Ard Tyr Tyr Ala Gly Asp Glu Arg Ala Leu Ser Fhe Fhe His Gln Lys Gly Leu Gln Asp The Asp Thr Lou Leu Leu Ser Gly Asp Gly Asn Thr Teu Tyr Val Gl; A.a Arg Glu Ala Ilo Lou Ala Leu Asp Ile Glu Asp Pro Gly Val Pr & Arg Leu Lys Asn Met Ile Pro Trp Pro Ala Ser Asp Arg Lys Lys Ser Glu Cys Ala Phe Lys Lys Lys Ser Ash Glu Thr Gln Cys Phe Asn Phe Ile Arq Val Leu Val Ser Tyr Asn  $1 + \cdots$ 13:1 Val Thr His Leu Tyr Thr Cys Gly Thr Phe Ala Phe Ser Pro Ala  $1 \div 0$ Cys Thr Phe Ile G.u Leu Gln Asp Ser Tyr Leu Leu Fro Ile Ser 155 Glu Asp Lys Val Met Glu Gly Lys Gly Gln Ser Pro Fhe Asp Pro Ala His Lys His Thr Ala Val Leu Val Asp Gly Met Leu Tyr Ser Gly Thr Met Asn Asn Phe Leu Gly Ser Glu Pro Ile Lou Met Arg (141) 20:5 Thr Leu Gly Ser Gli Pro Val Leu Lys Thr Asp Asn Phe Leu Arg 220 215 Trp Leu His His Amp Ala Ser Phe Val Ala Ala Ile Pro Ser Thr Gln Val Val Tyr Phe Phe Fhe Glu Glu Thr Ala Ser Glu Phe Asp . 15 Fhe the Glu Arg Leu His Thr Cer Ard Val Ala Arg Val Cys Lys Ash Alp Tal Gly Gly Glu Lys Jeu Jeu Gir Lys Lys Trp Thr Thr The less Lys Ala Glo Less Less Typ Thr Win Fr Hig Win Less Fro

				. 3					, 4°					7
Ehv	ĀSI.	7:1	Il.	Ara Suf	H13	Ā., 1	7:1	I + :	led 71	11	Ala	Aq	÷,.,I	Fr:31:
Thr	Ala	Fro	ніѕ	Ile Sau	Tyr	Alā	Vil	Ete	Thr 325	Por	Gln	Tip	Gln	Val 330
Gly	Jly	Thr	Ārģ	Ser 335		Ala	lru	rys	Ala 340	Fhe	Ser	Leu	Leu	A3p 345
Ile	Clu	Ard	Val	Elie 350	Lys	G1;	Lys	Tyr	Lys 355	Glu	Lea	Asn	Lys	Glu 300
Thr	Ser	Arg	Trp	Thr 365	Thr	Tyr	Arq	317	Erc 370	Glu	Thr	Asn	Pro	Arq 375
Fro	С1у	Ser	Суз	Ser 380	Vāl	Gly	Fro	Sei	Ser 385	Asp	ГЛЗ	Ala	Leu	Thr 330
Phe	Met	Lys	Asp	Has 395	Phe	Leu	M⊖t	Asp	Glu 400	Gln	Val	Val	Gly	Thr 4.05
Pro	Leu	Leu	Val	Lys 410	Ser	Gly	Val	Glu	Tyr 415	Thr	Arg	Leu	Ala	Val 4≳0
Glu	Thr	Ala	Gln	61.7 425	Leu	Asp	Gly	His	Ser 430	His	Leu	Val	Met	Tyr 435
Leu	Gly	Thr	Thr	Thr 440	Gly	Ser	Len	His	Lуя 445	Ala	Val	Val	Ser	G17 450
Asp	Ser	Ser	Ala	His 455	Leu	Val	Glu	Glu	11e 460	Gln	Leu	Phe	Pro	Азр 465
Pro	Gļu	Pro	Val	Aig 470	Asn	Leu	Gln	Leu	Ala 475	Pro	Thr	Gln	Gly	Ala 480
Va]	Phe	Val	Gly	Phe 415	Ser	Gly	Gly	Val	Trp 490	Arg	Val	Fro	Arq	Ala 495
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Asp	Pro	His	Cys	Ala 515	Trp	Asp	Pro	Glu	Ser 520	Arg	Thr	Cys	Суѕ	Leu 575
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cly	Asn	Pro	Glu	Trr 145	Ala	Cys	Ala	Ser	Gly Gly	Fro	Met	Ser	Arg	Ser 155
Lenz	Arg	Ero	Gln	Ser 169	Ara	Fro	aln	1.0	Ile	liys	Cl::	Val	Len	Ala
Val	F 1	A⊆I.	Cer	116	Leu	11.1	i ve	I:	Cys	Fro	Hi.*	141		Ale

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Let Ala Jer Tyr Tyr Trr der Him Gly Ern Ala Ala Val Ert Glu
Fac
 Ala Ser Cor Thr Val Tyr Ash Gly Ser Leu Lon Lou Ile Val Gln
 Asp 3ly Val Gly Gly Leu Tyr Gln Cys Trp Ala Thr Glu Asn Gly
 Pho Sor Tyr Pro Val Ile Ser Tyr Trp Val Asp Ser Gln Asp Gln
                                      640
                  635
 The Lou Ala Leu Asp Fre Glu Leu Ala Gly Ile Fre Arg Glu His
 Val Lys Val Pro Lou Thr Arg Val Ser Gly Gly Ala Ala Leu Ala
 Ala G.n Gln Ser Tyr Trp Pro His Phe Val Thr Val Thr Val Leu
 Ene Ala Leu Val Leu Ser Gly Ala Leu Ile Ile Leu Val Ala Ser
 Pro Leu Arg Ala Leu Arg Ala Arg Gly Lys Val Gln Gly Cys Glu
                                       115
 Thr Lou Ard Pro Gly Glu Lys Ala Pro Leu Ser Arg Glu Gln His
 Lou Gln Ser Pro Lys Glu Cys Arg Thr Ser Ala Ser Asp Val Asp
                 740
                                      7.15
 Ala Asp Asn Asn Cys Leu Gly Thr Glu Val Ala
<\!\!310\cdot..78
1.111.4
\text{-}1.11.7 = \text{DNA}
Pully Artificial
<. D()
4.71 - Artificial Sequence
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*LLT Synthetic construct.
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 - Hantugida aatotoodogt qoaq 24
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 harctigica igradolggy aaccancada ygylegeted acaag 45
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of Lee DNA
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 theritated etggggtedt geteteagag getgeeaaaa teetgasaat 150
 atotacaqta ggtqquagoc attatotact qatggaccuq gtttotcaga 200
 ithitcaaga toacggtoat aatgtoacca tgottaacca caaaagaggt 250
 continatgo cagatittaa aaaggaagaa aaat mitato aagtiatoag 30)
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 fotttotgga agaaacttta ggtggcagag gaaaatttga aaacttatta 400
 antutictag aatacitygo yttycagtyc agtcattiit taaatagaaa 450
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+210+252 +211+513 +211 HRT +213+Homo sapiens

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Gly	Val	Leu	I.eu	S#1 ,10	Glu	Ala	Ala	Lys	110 35	Leu	Thr	Ile	Ser	Thr 30
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Leu	Gln	Asp	His	Gly	His	Asn	Val	Thr	Mat	Lou	Asn	His	Lys	Arq 6')
Gly	Fro	Phe	Met	Pro 65	Asp	Fhe	Lys	Lys	Glu	Glu	Lys	Ser	Tyr	Gl:
Val	Ile	Ser	Trp	Lean seco	Ala	Pro	Glu	Asp	H:# A*i	Gln	Arg	Glu	Phe	Lyn 90
Lys	Ser	Phe	Asp	P}	Phe	Leu	Glu	Glu	Thr 100	Leu	Gly	Glγ	Arg	G137 105
Lys	Fhe	Glu	Asn	Lera 11	Leu	Asn	Val	Leu	Glu 115	Tyr	Leu	Ala	Leu	(31 m 1.20
Cys	Ser	His	Fhe	L+··1 1, ···	Asn	Arq	Lys	Asp	11e 150	Met	Asp	Ser	Leu	Lys 135
Asn	Glu	Asn	Phe	Asp 140	Met	Val	lle	Val	31u 145	Thr	Phe	Asp	Tyr	Cys 150
Pro	Fhe	Leu	Ile	Ala 15%	Glu	Lys	Leu	Gly	Lys 1+0	Pro	Phe	Val	Ala	11e 165
L€u	Ser	Thr	Ser	Ph⊬ 177	Gly	Ser	Leu	Glu	Phe 155	Gly	Leu	Pro	Ile	Pro 180
Leu	Ser	Туг	Val	Pro 185	Val	Phe	Arg	Ser	երս 1"•0	Leu	Thr	Asp	Hís	Met 195
Asp	Phe	Trp	Gly	Arg 200	Val	Lys	Asn	Phe	Leu 205	Met	Phe	Phe	Ser	Phe 210
$C_T \mathfrak{s}$	Arg	Arg	Gln	Gln 215	His	Met	Gln	Ser	Thr 220	Fhe	Asp	Asn	Thr	11e 225
Lys	Glu	His	Ehe	Thr 230	Glu	Gly	Cer	Arq	Fro	Val	Leu	Ser	His	Leu .40
ieu	Len	Lys	Āla	91u 24°	Leu	Trp	Me	Hie	Asn ,50	Ser	Asr	Fhe	Ala	libe all
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The Ile Ala	a Lys The jian		Ser Gly	The Mal L-u 195	Tal Thr Leu 300
Gly Ser Met	Val Asn But		Gln Asn	fro Glu Ile 31)	The Lys Glu 315
Met Asn Asr	n Ala Fhe 3.27		Leu Pro	Gln Gly Val	lle Trp Lyb 330
Cys Gln Cys	Ser His		Lys Asp	Val His Leu (4)	Ala Ala Aun 3:5
Val Lys Ile	e Val Arp		Pro Glr.	Per Asp Leu 465	Leu Ala H.s. Beh
Pro Ser Ile	e Arg Len Buch		Thr His	Gly Gly Gln 370	Asn Ser Ile 315
Met Glu Ala	i Ile Glin 500		Val Pro	Mot Val Gly	Ile Pro Lea 3 mi
Phe Gly Asp	Gln Erb 340		Met Val	Arş Val Glu 400	Ala Lys Lys 4 5
The Gly Val	Ser II		Lys Lys	Lei Lys Ala 415	(31u Thr L+u 4.(
Ala Leu Lys	Met Lys 415		Met. Glu	App Lys Arg 430	Tyr Lys Ser 4.5
Ala Ala Val	Ala Ala 440	Ser Val	Ile Leu	Arg Ser His	Fro Leu Ser 450
Pro Thr Gln	Arg Leu 41-5	Val Gly	Trp Ile	Asp His Val 460	Leu Gln Thr 455
Gly Gly Ala	Thr His 470	Leu Lys		Val Phe Gln 47%	Gln Pro Trp- 480
His Glu Gln	Tyr Leu 485	Phe Asp	Val Fhe	Vul Phe Leu 490	Leu Gly Leu 495
Thr Leu Gly	Thr Leu 500	Trp Leu	Cys Gly	Lys Leu Leu 50°	Gly Met Ala 510
Wal Trp Trp	Leu Arg 515	Gly Ala	Arg Lys	Val Lys Glu tio	Thr

<sup>+210&</sup>gt; 283 +211+ 24 +212+ 112 +111- Artificial

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203 Synthetic construct.
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unit Synthetic construct.
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🖒 🗀 Artificial Sequence
1.45
Table Synthetic construct.
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-.110 - .186
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*:::3 Homo sapiens
sam) - 286
-dug:tgttga tttgtqqggg attttgaaga gaggaqqaat aggaddaagg 50
 ggtigaggg otgoctotgg datatgcaca cactoacaca ttotgtoaca 100
 decentración anacatacha tettotecat recodecaget coagecetra 150
 gtortgicce atccagcago getaccetga agetetyget geageratee 200
 eqtecagtgg geaggegget teatecetes titistetece aaageeraae 250
 tgrigicasi graigstoig obaaggayga gggaasigsa gigaraynag 300
 digtaaqagt qqqagqmagq amagaqofgg gacacaggta tqqagaqggq 350
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 nragjusdad isduddaaar assadaddd, rsjaassirid ddscaifigt 450
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tggqggccgg gtgqqcccag gaggggtcag ag. regtest yetggagggg 600.
gaqtqeetgg tyutotytga qootggeega yetgetgeag qygygeeegg 640.
gggawbagdo otyggagagg babbbbbtgg wegagtggga titgetgegg 70%
toogaagoda odaccatgag chagdagggg haaddaggdaa tygdaadagt 7500
ggggccatot acttogacoa gytootggtg aacyagggeg ytggctttya AO.
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gyttheatyt gytgaagyty tacaaeegee aaaetyteca nytgageety 900
atgotgaada ootggootgt catotoagoo tittgocaatd atootgaogt 950.
jacoogygaj geagocacca dotetytyet aetyceetty gabestygyg 1000
accgagtgto totgogootg ogtoggggga atotactggg tggttggaaa 1950
tactcaagtt tototggott cotcatotto netototgag gacccaagte 1190.
tttbaagoad aagaatodag coobtgadaa otttottety cootototty 1100
occoagaaac agoagaggoa ggagagagac teestbtggo teetateesa 1,\,\,\,\mathrm{ord}
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ggogoaggty agnetgaday gooddbadag gagondagat dgadaagddt 1500.
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aggstraged acaggragaa gggtgggaag ggddtggagt ctqtggdtgg 1650^\circ
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400.4 287

Met Leu Gly Ala Lys Pro His Trp Leu Pro Gly Pro Leu His 3-r 10 10 10

Fro Gly Leu Fro Leu Val Leu Val Leu Leu Ala Leu Gly Ala Gly  $\mathbb{R}^{20}$ 

Trp Ala Glu Glu Gly Ser Glu Pro Val Leu Glu Gly Glu Cys (5) 40,

Leu Val Val Cys Glu Pro Gly Arg Ala Ala Ala Gly Gly Pro Gly 55

Gly Ala Ala Leu Gly Glu Ala Pro Pro Gly Arg Val Ala Phe Ala 65 70 70

Ala Val Arg Ser H.s His His Glu Pro Aia Gly Glu Thr Gly Arm 80  $^{-85}$ 

Gly Thr Ser Gly Ala Ile Tyr Phe Asp Gin Val Leu Val Ash Glu .65 100 105

Gly Gly Gly Phe Asp Arg Ala Ser Gly Ser Phe Val Ala Pro Val 110 110

Arg Gly Val Tyr Ser Phe Arg Phe His Val Val Lys Val Tyr Asn 1.5

Arg Gln Thr Val Gin Val Ser Leu Met Leu Asn Thr Trp Frc Val

Ile Ser Ala Fhe Ala Asn Asp Pro Asp Val Thr Arg Glu Ala A.a 155 160 165

Thr Ser Ser Val Leu Leu Fro Leu Asp Fro Gly Asp Arg Val Ser

<sup>+.210% 287</sup> 

 $<sup>\</sup>pm 3.11 \pm 2.05$ 

<sup>+012 +</sup> PRT

<sup>· 113</sup> Homo sapiens

be: Ari Lou Aig Arg Gly Ash Leu Leu Gly Gly Trp Lys Tyr Ser

Se: Fha Ser Gly Fhe Leu Ile Phe Fro Leu 200

213> 838

-211 - 24

 $0.12 \cdot 00A$ 

213 Artificial

1000

Artificial Sequence
17.7 - 1-24

1833 Synthetic construct.

 $1400 \times 788$ 

High a recac cagetetgtg ctae 24

4211 17

:21. DNA

4.13 Artificial

1.10

1...1 Artificial Sequence

12. \* Synthetic construct.

4400 89

оныд нуда agatgaggaa gccagag 27

-1.10 · ...()

en:11 - 42 -:11.5 bMA -:11.5 Artificial

 $\{1,\dots,2,n\}$ 

\*:.:1: Artificial Sequence
\*:... 1-42

· ... · Synthetic construct.

-40---390

configuract gedettggae detggggade gagtgtetet ge 42

8010, 091

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 $\text{COL}_{\mathcal{F}} \in \text{DNA}$ 

<21." Homo sapiens

+400 - 291

actattate tegenerace actggeogee ggoogeaget coaggtgtee 50

tade modina and makan ngthooggga incotatadi etgalagaag 100

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· *10 · 202
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+400> 292

Met Lys	Thr Leu	I1. A	Ala Ala	Tyr Ser	Gly Val	Leu Ar	j Gly	Glu
ĵ					10			15

Ala Leu Ser Arg G1: Gly Ser Gly Arg Trp Gly Thr Gly Ser Ser 
$$3\%$$
  $4\%$ 

The Leu Ser Ala Leu Gln Asp Leu Phe Ser Val Thr Trp Leu Asm 
$$6.6 - 6.5$$

Arg Ser Lys Val Glu Lys Glu Leu Glu Val Ile Ser Val Leu Glu 
$$6^{\circ}$$

Trp Val Leu Ser Phe Leu Val Leu Gly Val Ala Cys Ser Ala Ile 80 
$$$\rm ^{35}$$

Leu Met Tyr Ile Phe Cys Thr Asp Cys Trp Leu Ile Ala Val Leu 
$$\mathfrak{P}^5$$
 106 106

Gly Arg Arg Ser Sin Trp Val Arg Asn Trp Ala Val Trp Arg Tyr 
$$1.0^\circ$$
  $1.35$ 

Leu Thr Thr Arg Ash Tyr Ile Phe Gly Tyr His Pro His Gly Ile 
$$155$$

Met Gly Leu Gly Ala Fhe Cys Asn Fhe Ser Thr Glu Ala Thr Glu 
$$177^{\circ}$$
  $175^{\circ}$ 

Val Ser Lys Lys Pho Pro Gly He Arg Pro Tyr Leu Ala Thr Leu 
$$185 - 195$$

led Ard Ast Arg Lys Gly Fhe Val Lys Led Ala Led Ard His Sly

<sup>0.11. ...</sup> 

<sup>..12 &</sup>gt; FAT

<sup>-2135</sup> H m. sariens

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365
                  260
 Ala Asy Lev Val Ero lie Tyr Cer the Bly Sin Ash Glu Val Tyr
 Lys Glm Vai Ile Phe Glu Glu Gly Ser Trp Gly Arg Trp Val Glr.
                  £ )(:
                                                             300
 Lys Lys Ehe Glm Lys Tyr Ile Gly Ehe Ala Ero Cys Ile Ehe His
                                       310
 Gly Ari Gly Leu Phe Ser Ser Asp Thr Trp Gly Leu Val Pro Tyr
                  3..0
 Ser Lys Pro Ile Thr Thr Val Val Gly Glu Pro Ile Thr Ile Fro
 Lys Leu Glu His Fro Thr Gln Gln Asp Ile Asp Leu Tyr His Thr
                  350
 Me" Tyr Met Glu Ala Leu Val Lys Leu Phe Asp Lys His Lys Thr
 Lys Fng Gly Leu Pro Glu Thr Glu Val Leu Glu Val Asn
                  380
. 210 - 193
+311+34
+312 DMA
+313 Artificial
< .22() -
*::::: Artificial Sequence
..... 1-24
1723 Cynthetic construct.
< 100 - 293
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iordanotgg ttoccateta etce 24

7.10 · .94 F.111 · .4 F.11. · DNA

Artificial

< .'. il'

\*:LL: Artificial Sequence
\*:LL: 1-24
\*:LL: Synthetic Censtruct.

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+011 × 50 +010 × 5NA +203 + Artificial

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4213 Synthetic construct.
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<...10
     236
111
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4212 INA
<213 Homo sapiens
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 Hogyer goag gottgtocag coggaagood tgagggcago tgttoccaet 200
 igototgotg additigtigdo titggaoggot glooteagog aggggoogtg 250
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gogittogga gtgotgggga gotocaaggt cotogotaag aaggagotgo 650
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 tychalbyga agtgggagga ggabogggab abogtggtog aagggbtgag 750
goguetytog gaetacoocy agtacatyty ytttotocty tactycyayy 800
gyacynyott caeggagaed aagcaeegeg ttageatgga ggtggegget 850
gotaamiggo ttootqtoot caagtabban otgotgoogo ggabbaaggg 400
ottoarbaco goagtoaagt gootoogggg gacagtogca gotgtotatg 950
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Val Gln Leu Cys Thr Leu Ala Leu Trp Pro Val Ser Lys Gln Leu 35 40 40

Tyr Arg Arg Leu Asr Cys Arg Leu Ala Tyr Ser Leu Trp Ser Gin 50 -60

Leu Val Met Leu Leu Glu Trp Trp Ser Cys Thr Glu Cys Thr Leu. 65

The Thr Asp Gln Ala Thr Val Glu Arg Phe Gly Lys Glu His Ala 80 85

Val Ile Ile Leu Asn His Asn Phe Glu Ile Asp Phe Leu Cys Gly 95 10%

Trp Thr Met Cys Glu Ard Phe Gly Val Leu Gly Ser Ser Lys Val 110 115

Len Ala Lys Eys Giu Leu Leu Tyr Val Pro Leu Ile Gly Trp Thr 125 130

Trp Tyr Fhe Lea Glu Ile Val Fhe Cys Lys Ara Lys Trp Glu Glu 145 - 150

Act As a Act Thr Val Val Glu Gly Les Arg Ara Les Ser Act Tyr 165

<sup>&</sup>lt;::10> 297

<sup>&</sup>lt;.:11> 368

<sup>4.212&</sup>gt; PRT

<sup>&</sup>lt;.213 - Homo sapiens

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170 175
    The Thr Tys His Ard Val Cer Met Gla Val Ala Ala Ala Lys
                                     160
ely Tou Fic Val Leu Lys Tyr His Leu Leu Pro Arg Thr Lys Gly
                 200
ing Thr Thr Ala Val Lys Cys Leu Arg Gly Thr Val Ala Ala Val
Tyr Amp Val Thr Leu Asn Fhe Ard Gly Asn Lys Asn Fro Ser Leu
Ten Gly Ile Lea Tyr Gly Lys Lys Tyr Glu Ala Asp Met Cys Val
                                     (i - i)
Ard Ard The Pro Leu Glu Asp IIe Pro Leu Asp Glu Lys Glu Ala
Ala Gln Trp Leu H.s Lys Leu Tyr Gln Glu Lys Asp Ala Leu Gln
                                     <u> 280</u>
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Ala Ser Gly Ser Pro Leu Leu Ile Leu Thr Phe Leu Gly Phe Val
                                     24€
Gly Ala Ala Ser Fhe Gly Val Arg Arg Leu Ile Gly Glu Ser Leu
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Glu Fro Gly Arg Trp Arg Leu Gln

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<310> 298
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<sup>&</sup>lt;.:11.5 24

<sup>&</sup>lt;012> DNA

r.113> Artificial

<sup>. 262</sup> 

<sup>...1 -</sup> Artificial Sequence

<sup>2.2 1-24</sup> 

<sup>223 -</sup> Synthetic construct.

<sup>-400 - 208</sup> 

inttantint digtagacha tata 24

<sup>-210 - 199</sup> -211 - 21 -112 - 188

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+/23 Synthetic construct.
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<2111> 1334
< 312: LNA
·213 Homo sapiens
· 400> 301
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- <211→ 143
- <2120 PRT
- <013 Homo sapiens
- <4000-302
- Met His His Ser Leu Gln Cys Fro Gly Ala Ala Thr Arg His Il-1 5 10 19
- His Lou Cys Val Cys Phe Cer Phe Ala Leu Ala Leu Gly His Phe 20 25 30
- Leu Leu Ile Ser Leu Val Gly Lys Gly Leu Ser Leu Ser Cys Gly 45
- Val Gly Gly Arg Gin Ala Gly Leu Arg Leu Ile Arg Pro Trp Val 55 60
- Arg Arg Glu Gly Lys Ile Asn Phe Tyr Thr Asn Gly Asp Ser Trp  $65\,$
- Gly Len Arg Pro Ala Ser Ser Val Lys Phe Leu Gly Ser Ala Tyr 80 85 90
- Thr Fhe Fhe Ser Leu Thr Trp His Thr Leu Leu Lys Ala Ser Gln 95 100
- Cly Fhe Ser Leu Fhe Leu Gly Jer Lys Tyr Leu Glu Leu Gln Glu 110 115 120
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<.311> 109

KL12 PRT

<!!!! Home sapiens</pre>

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Val Fhe Cys Sor Lou Val Thr Ser Lou Tyr Leu Fre Asn Thr Glu

Asp Leu Ser Leu Trp Leu Trp Pro Lys Fro Asp Leu His Ser Gly  $\pm 5$ 

Thr Arg Thr Glu Val Ser Thr His Thr Val Pro Ser Lys Pro Gly

Thr Ala Ser Fro Cys Trp Fro Leu Ala Gly Ala Val Pro Ser Fro

Thr Val Ser Ard Leu Glu Ala Leu Thr Ard Ala Val Gln Val Ala 80 85 90

Glu Pro Leu Gly Ser Cys Gly Phe Gln Gly Gly Fro Cys Pro Gly 95  $10^{\circ}$ 

Arg Arg Arg Asp

<sup>..10 - 305</sup> 

<sup>1211 - 989</sup> 

<sup>1212 -</sup> INA

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<sup>&</sup>lt;. 10 ← 306

<sup>4.110 262</sup> 

<sup>&</sup>lt;..12 · FRT

<sup>+.13</sup> Homo sapiens

- and fer Mot Ang Glu His Fr. Ala Leu Ang Sor Leu Ang Leu Leu The Low Glu Gln Fre Gla Gly Amp Ser Met Met The Cys Gla Gla Ala Gin Leu Leu Ala Ash Leu Ala Ard Leu Ile Gin Ala Lys Lys Ala bou Asp Leu Bly Thr Fhe Thr Gly Tyr Ser Ala Leu Ala bon 1100 Ala Lou Ala Leu Fro Ala Asp Gly Ard Val Val Thr Cys Glu Val Asp Ala Gln Pro Pro Glu Leu Gly Arg Pro Leu Trp Arg Gln Ala Glu Ala Glu His Lyr Ile Asp Leu Arg Leu Lys Pro Ala Leu Gla Thr Leu Asp Glu Leu Leu Ala Ala Gly Glu Ala Gly Thr Phe App Val Ala Val Val AMP Ala Asp Lys Glu Amn Cys Ser Ala Tyr Tyr 180 - 180 - 180 Glu Arg Cys Leu Gl: Leu Leu Arg Pro Gly Gly Ile Leu Ala Mal . 00 205 bel Arg Val Leu Trp Arg Gly Lys Val ben Gla Pro Pro Lys Gr $\gamma$ . 15 Asp Val Ala Ala Glu Cys Val Arg Asn Leu Asn Glu Arg Ile Arg Arg Asp Val Arg Val Tyr Ile Ser Leu Leu Pro Leu Gly Asp Gly Leu Thr Leu Ala Phe Lys Ile 260
- 4010 + 307
- +1.11 + 2272
- +1.12 + DNA
- +1213 + Homo sapiens
- <400. 307
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## 400-368

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- Lys Gly Tyr Pro His Trp Pro Ala Arg He Asp Asp He Ala Asp 20 25
- Gly Ala Val Lys Pro Pro Pro Asn Lys Tyr Pro Ile Fhe Phe Phe 35 40 44
- Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe Pro 55 60
- Tyr Asp Lys Cys Lys Asp Lys Tyr Gly Lys Pro Asn Lys Arg Lys 65 70 75
- Gly Fhe Asn Glu Gly Leu Trp Glu Ile Gln Asn Asn Fro His Ala 80 85
- Ser Tyr Ser Ala Pro Fro Pro Val Ser Ser Ser Asp Ser Glu Ala 95 105
- Fro Gin Ala Ash Ero Ala Asp Gly Ser Asp Ala Asp Glu Asp Asp 110 120
- The Asy Ard Gly Val MA+ Ala Val Thr Ala Val Thr Ala Thr Ala 125
- Ala Der Ad, Ard Met. His Der App der Aspider Aspilye der Cer

<sup>42100 308</sup> 

<sup>4311 · 671</sup> 

<sup>:212 ·</sup> PRT

t221 + Homo sapiens

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iro Olu Glu Lys Gin Olm Ala Lys Fre Val Lys Val Olu Ara Thr
 Arg Lys Arg Ser Glu Gly Phe Ser Met Asp Arg Lys Val Glu Lys
 Lys Lys Glu Pro Ser Val Glu Glu Lys Leu Gln Lys Leu His Ser
 3ld Tie Lys Phe Ala Leu Lys Val Asp Ser Pro Asp Val Lys Ard
 Dys Leu Ash Ala Leu Slu Glu Leu Gly Thr Leu Gln Val Thr Ser
 Gln He Leu Gln Lys Asn Thr Asp Val Val Ala Thr Leu Lys Lys
 Ile Arg Arg Tyr Lys Ala Asn Lys Asp Val Met Glu Lys Ala Ala
 Gli Val Tyr Thr Arg Leu Lys Ser Arg Vil Leu Gly Pro Lys Ile
 Gli Ala Val Glr Lys Val Asn Lys Ala Gly Met Glu Lys Glu Lys
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 Pro Val Ash Gly Glu Ala Thr Ser Gln Lys Gly Glu Ser Ala Glu
 Asp Lys Glu His Glu Glu Gly Arg Asp Jer Glu Glu Gly Pro Arg
 Cys Gly Ser Ser Giu Asp Leu His Asp Cer Val Arg Glu Gly Pro
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attgotgagt taatotytty taattytagt attyttttty taatttaaca 38 ()
atamataago otgotacatg t 3871
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Met Asn Ala Asn Lys Asp Glu Arg Leu Lys Ala Arg Ser Gln Asp 1 5 10

Fhe His Leu Fhe Pro Ala Leu Met Met Leu Ser Met Thr Met Leu 20 25 30

Phe Leu Prc Val Thr Gly Thr Leu Lys Gln Asn Ile Fro Arg Leu 35 49

Lys Leu Thr Tyr Lys Asp Leu Iou Leu Cer Ash Ser Cys Ile Fro 50 60

The Leu Sly Ser Ser Glu Sly Leu Asp the Glu Thr Leu Leu Leu 65

Acr Glu Glu Arg Gly Ard Led Led Ned Gly Ala Lys Acr His Ile

<sup>&</sup>lt;...10 · 310

<sup>::11 · 777</sup> 

<sup>4.10 ·</sup> FRT

<sup>..13 ·</sup> Homo sapiens

<sup>&</sup>lt;400 - 310

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Fhe	e Len	Leu	Ser	I → 1	∵al	Asp	Ieu	Asn	L;s		Phe	Lys	Lys	11 10
Tyr	Trp	Fro	Ala	A1 a 110		Glu	Arg	Val	51a 115		Cys	Lys	Leu	Al 13
Gl,	. Lys	Asp	Ala	Asn 175		Glu	Cys	Ala	Asn 130		Ile	Arg	Val	L 13
Gln	Pro	Tyr	Asn	178 140		His	Ile	Tyr	Val 145		Gly	Thr	Gly	Al 15
Phe	His	Pro	Il⊖	Oya The	Gly	Туг	Ile	Азр	160		Val	Tyr	Lys	G1 15
Азр	Ile	Ile	Phe	175	Le∙u	Asp	Thr	His	A <i>s</i> n 175		Glu	Ser	Gly	Ar 13
Leu	Lys	Cys	Pro	Phe 135	Asp	Pr	Gln	Gln	Pro 190	Ph€	Ala	Ser	Val	M∈1.±
Thr	Asp	Glu	Tyr	Leu 200	Tyr	Ser	Gly	Thr	Ala 205		Asp	Phe	Leu	:31 : .11:
Lys	Asp	Thr	Ala	Ph ← - 1 °	Thr	Arı	Ser	Leu	647 229	Pro	Thr	His	Asp	Ha :
His	Tyr	Ile	Arg	Thi 130	Asp	Il∵	Ser	Glu	His 135	Tyr	Trp	Leu	Asn	(1) (3)
Ala	Lys	Ph€	Ile	G1 y 1.45	Thr	Fh⊖	Phe	Ile	Pro 150	Asp	Thr	Tyr	Asn	P1:
Asp	Asp	Asp	Lys	11e 360	Tyr	Fhe	Phe	Phe	Ard 265	Glu	Ser	Ser	Gln	(31) 27)
Giy	S∈r	Thr	Ser	ASE L.E.	Lys	Thr	Ile	Leu	Ser .180	Arg	Val	Gly	Arg	Va 1 1187
Cys	Lys	Asn	Asp	Val 190	Gly	Gly	Gln	Arg	Ser 295	Leu	Ile	Asn	Lys	71T
Thr	Thr	Phe	Leu	Lys yng	Ala	Aru	Leu	Ile	Cys 510	Ser	Ile	Pro	Gly	Ser 315
Asp	GlŢ	Ala	Asp	3 h r 326	Tyr	Ph⊷	Asp	Glu	Leu 525	Gln	Asp	Ile	Tyr	Lei Rei
Leu	Pre	Thr	Arg	As p	Glu	Arq	Asn	Pro	Val 340	Val	Tyr	Gly	Val	Fh∈ ./45
Thr	Thr	Thr	Ser	Ser 35)	Ile	Fhe	Lys	Gly	Ser 355	Ala	Val	Cys	Val	Tyr 360
Cer	Met	Ala	Āsp	Ile 365	Arg	Ala	∵al	Fhe	Asn Por	Cly	Pro	Tyr	A. ā	His you

Tys Sin Ser Ala As; His Ard Trp Val Sin Tyr Asp Siy Arg Ile Fr. Tyr Fre Arg Pro Gly Thr Cys Pre Ser Lys Thr Tyr Asp Pro Leu Ile Lys Ser Thr Arg Asp Phe Pro Asp Asp Val Ile Ser Phe The Lys Arg His Ser Val Met Tyr Lys Ser Val Tyr Pro Val Ala Gly Gly Pro Thr Pho Lys Arg Ile Ash Val Asp Tyr Arg Leu Thr Gln Ile Val Val Asp His Val Ile Ala Glu Asp Gly Gln Tyr Asp 1 > Val Met Phe Leu Gly Thr Asp Ile Gly Thr Val Leu Lys Val Val Ser Ile Ser Lys Glu Lys Trp Asn Met Glu Glu Val Val Leu Glu 490 Glu Leu Gln Ile Phe Lys His Ser Ser Ile Ile Leu Asn Met Glu 50 (i. Leu Ser Leu Lys Gli Gli Gli Leu Tyr Ile Gly Ser Arg Asp Gl; Leu Val Gln Leu Ger Leu His Arg Cys Asp Thr Tyr Gly Lys Ala Cys Ala Asp Cys Cys Leu Ala Arg Asp Pro Tyr Cys Ala Trp Asp  $\varepsilon, \varepsilon, \varepsilon_1$ Gly Asn Ala Cys Ser Arg Tyr Ala Pro Thr Ser Lys Arg Arg Ala Arg Arg Gln Asp Val Lys Tyr Gly Asp Pro Ile Thr Gln Cys Trp Asp Ile Glu Asp Cer Ile Ser His Glu Thr Ala Asp Glu Lys Val  $\iota)\!\in\!\iota^1$ Ile Phe Gly Ile Glu Phe Asn Ser Thr Phe Leu Glu Cys Ile Fro +10Lys Ser Gln Gln Ala Thr Ile Lys Trp Tyr Ile Gln Arg Ser Gly Asp Glu His Arg Glu Glu Leu Lys Pro Asp Glu Arg Ile Ile Lys Thr Glu Tyr Gly Leu Leu Ile Arg Ser Leu Gln Lys Lys Asp Ser Gly Met Tyr Tyr Cys Lyd Ala Gln Glu His Thr Fho Ile His Thr

€.c 6-0 The Mal Lys Lou Thr Lew Asm Mal The Glu Asm Glu Glm Met Glu Asn Thr Gln Arg Ala Glu His Glu Glu Gly Gln Val Lys Asp Leu Leu Ala Glu Ser Arg Leu Arg Tyr Lys Asp Tyr Ile Gln Ile Leu Ser Ser Pro Asn Phe Ser Leu Asp Gln Tyr Cys Glu Gln Met Trp His Arg Glu Lys Arg Arg Gln Arg Asn Lys Gly Gly Pro Lys Trp 740 Lys His Met Gln Glu Met Lys Lys Lys Arg Asn Arg Arg His His Arg Asp Leu Asp Glu Leu Pro Arg Ala Val Ala Thr 770 4010 × 311 K211 + 25 = 1=1 + FNA ... 13 Artificial \* 11 W.1 - Artificial Sequence 1..2 1-25 FLD: Synthetic construct. (400 + 511)ായുടുമുടെ gtgataaaca agtgg 25  $\pm 310 \pm 313$ +N11 - 24 +N1. DNA +NY - Artificial - 220 Sall - Artificial Sequence 1-1.4 AMA: Synthetic construct.  $\times 400 - 512$ quitguarat quaccaquec quaq 24 < 1.10 < 313<.011 45 1.12 DNA <.13> Artificial · 1.70. <221 - Artificial Cequence -2.2. 1-45 <223 - Synthetic trustruct.

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\*210 \* 514
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<Z12 PNA

<213> Homo sapiens

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<sup>73:10× 315</sup> 

<sup>· 211 - 370</sup> 

<sup>+212 &</sup>gt; IFT

<sup>/213 ·</sup> Home sagiens

<sup>400-415</sup> 

Met Ch 16% Ala Lyr Tyr Gin Cor His Jer Lyr Ser Cyc Fr Thr

Val Phe Pro Pro Thr Pro Val Lou dys Lou Pro Ach Bln Val Lou Gln Ard Leu Glu Gln Ard Ard Gln Gln Ala Ser Glu Ard Glu Ala Pro Ser Ile Glu Gln Arg Leu Gln Glu Val Arg Glu Ser Ile Arg Arg Ala Sin Val Ser Gin Val Lys Gly Ala Ala Arg Leu Ala Leu Len Gln Gly Ala Gly Leu Asp Val Glu Arg Trp Leu Lys Pro Ala Mot Thr 3lm Ala 3lm Asp 3la Val Glu 3lm Glu Arg Arg Leu Ser -1.00Glu Ala Arg Leu Ser Gln Arg Asp Leu der Pro Thr Ala Glu Asp Ala Glu Leu Ser Asp Phe Glu Glu Cys Glu Gla Thr Gly Glu Leu Fhe Glu Glu Pro Ala Pro Gla Ala Leu Ala Thr Arg Ala Leu Pro Cys Fro Ala His Val Val Phe Arg Tyr Gir Ala Gly Arg Glu Asp Glu Leu Thr Ile Thr Glu Gly Glu Trp Leu Glu Val Ile Glu Glu 170 Gly Asp Ala Asp Glu Trp Val Lys Ala Arg Asn Gln His Gly Glu 185 Val Gly Phe Val Pro Glu Arg Tyr Leu Asn Phe Pro Asp Leu Ser 260 Leu Pro Glu Ser Ger Gln Asp Ser Asp Asn Pro Cys Gly Ala Glu Pro Thr Ala Phe Leu Ala Gln Ala Leu Tyr Ser Tyr Thr Gly Gln Ser Ala Glu Glu Leu Ser Phe Pro Glu Gly Ala Leu Ile Arg Leu Leu Fre Arg Ala Glm Asp Gly Val Asp Acp Gly Phe Trp Arg Gly ...60 Glu Ehe Gly Gly Arg Val Gly Val Phe Iro Ser Leu Leu Val Glu Gir hou led Gly Pro Pro Gly Fro Pro Glu Leu Ser Asp Fro Glu Gin M . Lou Fro Jer Fr. Jer the Fro Jer The Ser tob Fro Ala

- 10 315

Fr. Thi Ser Val 194 Art Hy Fr. Fr. Ala Frc Val 184 Fro Gly

Asp Lys Ala Leu Asp Ehe Fro Gly Fhe Leu Asp Mot Met Ala Pro  $335 \\ 849 \\ 345$ 

Arg Let Arg Fro Met Arg Fro Pro Pro Pro Pro Pro Ala Lys Ala 350 355 360

Fro Asp Pro Gly His Fro Asp Pro Lei Thr 365

-211 - 316

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12135 Hemo sapiens

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- 4.0115 837
- <212> PRT
- <213> Homo sapiens

#### < 400° 317

- Met Ser Gla Thr Gl; Der His Erc Gly Arg Gly Leu Ala Gly Arg 1 5 10
- Trp Leu Trp Gly Ala Gln Pro Cys Leu Leu Pro Ile Val Pro 20 .5 .5
- Leu Ser Trp Leu Val Trp Leu Leu Leu Leu Leu Leu Ala Ser Leu 35
- Leu Pro Ser Ala Arg Leu Ala Ser Pro Leu Pro Arg Glu Glu Glu 50
- Ile Val Fhe Pro Glu Lys Leu Asn Gly Ser Val Leu Pro Gly Ser  $\frac{1}{2}$
- Gly Ala Ero Ala Arg Leu Leu Cys Arg Leu Gln Ala Ehe Gly Glu 80 85 90
- Thr Leu Leu Glu heu Glu Gln Asp Ser Gly Val Gln Val Giu 95 100 105
- Gly Leu Thr Val Gln Tyr Leu Gly Gln Ala Fro Glu Leu Leu Gly 110 115 120
- Gly Ala Gli Fr. Gly Thr Tyr Leu Thr Gly Thr Ile Ash Gly Asp 125 180 180
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Pro	Ser	IJę	Arg	Aan 260	Pro	Val	Ger	Leu	Val. 05	Val	Thr	Arg	Leu	7 :1 270
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Gly	Met	Ala	Asp	Val N35	Gly	Thr	Val	Cys	App Hap	Pro	Ala	Arg	Ser	1'ys 115
Ala	Ile	Vāl	Glu	A#p 550	Asp	Gly	Leu	Gln	Ω+nr gr,ę,	Ala	Phe	Thr	Ala	Ala 360
His	Glu	Leu	Gly	His 565	Val	Ehe	Asn	Met	Дец К70	His	Asp	Asn	Ser	Lys 375
Fro	Cys	Ile	fer	Leau e <sup>®</sup> O	Asn	Gly	Fro	Len	Ser 985	Thr	Ser	Arg	His	Va l 390
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Fro	Cys	Ser	Ala	Arg 410	Ft.e	He	Thr	Asp	Ehe 415	Teg	Asp	Asn	Gly	Tyr Çan
713	His	0.19	įeņ	1.64 424	Aup	Lys	1:*	314	Ala 430	Fre	Len	ніз	Levi	F.r. 424

Value into the Fr. Sly Lye Aq. Tye Aq. A.a Aq. Ary (Un. 7y+ 3ln -44%Lyb Thr Fhe 41; ird Asp Cer Ara His Cys Iro Oln Isb Fr  $45^\circ$ Fro Cys Ala Ala Lea Trp Cys For Gly His Len Asn Gly His Ala Met Cys 3ln Thr Lys His Ser Fro Tip Ala Asp Gly Thr Fro Cys Gly Fro Ala Cln Ala Cys Met Gly Gly Arg Cys Leu His Met Asp Gln Leu Gln Asp The Asm Ile Fro Gln Ala Gly Gly Trp Gly Fro Trp Gly Fro Trp Gly Asp Tys Ser Ard Thr Cys Gly Gly Gly Val Gln Fhe Cor Ser Arg Asp Cys Thr Arg Pro Val Pro Arg Asm Gly Gly Lys Tyr Cys Glu Gly Ara Ara Thr Arg Fhe Arg Ser Cys Asn Thr Glu Asp Cys Fro Thr Gly Ser Ala Leu Thr The Ard Gla Glu 580 Gla Cys Ala Ala Tyr Asn His Arg Thr Asp Leu Fhe Lys Ser Phe 590 Pro Gly Fro Met Asp Trp Val Fro Arg Tyr Thr Gly Val Ala Pro 610 Gln Asp Gln Cys Lys Leu Thr Cys Gln Ala Arg Ala Leu Gly Tyr Tyr Tyr Val Leu Glu Pro Ard Val Val Asp Gly Thr Fre Cys Jer Pro Asp Ser Ser Ser Val Cys Val Gln Gly Arg Cys Ile His Ala Gly Cys Asp Arg lie He Gly Ser Lys Lys Eys The Asp Lys Cys Val Cys Gly Gly Asp Gly Ser Gly Cys Jer Lys Gln Ser Gly 690 685 Cer Pho Ard Lys the Arg Tyr Gly Tyr Ach Ach Val Val Thr Ile (95) Fr. All Oly Ala Thr His lie len Val Arz Who Who Cly Ash Fro fely Bun Arm Jer Ile Tyr Ion Ala Ion Iyo Ion Br. Acr oly Jor

<2223 Synthytic chastriot.

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400 - 300
 ocavagatut yytachun milauxoaytin yittingota niy 45
+210 - 321
< 211> 1147
< 212 · DNA
<213 - Home sapiens
<400 / 321
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- < 212 FPT
- · 213 · H.m. sapiens

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- Met Ala Lys Asn Fro Pro Glu Asn Cys Glu Asr Cys His Ile Leu 1 5 10
- Asn Ala Glu Ala Ehe Lys Ser Lys Lys Ile Cys Lys Ser Leu Lys 20 25 30
- Ile Cys Gly Leu Val Fhe Gly Ile Leu Ala Leu Thr Leu Ile Val 35 45
- Leu Phe Trp Gly Ser Lys His Phe Trp Pro Glu Val Pro Lys Lys  $50^{\circ}$
- Ala Tyr Asp Met Glu His Thr Fhe Tyr Ser Ash Gly Glu Lys Lys  $\frac{1}{2}$
- Lys Ile Tyr Met Glu Ile Asp Pro Val Thr Arg Thr Glu Ile Phe 80 35 90
- Arg Ser Gly Asn Gly Thr Asp Glu Thr Lea Glu Val His Asp The  $\frac{45}{100}$
- Lys Asn Gly Tyr Thr Gly Ile Tyr Fhe Val Gly Leu Gln Lys Cys 110 115 1.0
- Phe Ile Lys Thr 31r Ile Lys Val Ile Fro Glu Fhe Cer Glu Pro 125 130
- Glu Glu Glu Ile Asp Glu Asn Glu Glu Ile Thr Thr Thr Phe Pho 140 145 150
- Glu Gln Ser Val Ile Trp Val Pro Ala Gln Lys Pro Ile Glu Agn 155 160 165
- Arg Asp The Leu Lys Asp Ser Lys Ile Leu Glu Ile Cys Asp Asp 176 176
- Val Thr Met Tyr Trp Ile Asn Pro Thr Leu Ile Ser Val Ser Glu 185 120 145
- Leu Glm Asp Phe Glu Glu Glu Gly Glu Asp Leu His Fhe Pro Ala 200 205
- Ash Glu Lys Lys Gly He Glu Gln Ash Glu Gln Trp Val Val Fro
- Gln Val Lys Val Glu Lys Thr Arg His Ala Arg Gln Ala Ser Gln 230 235
- Glu Glu Leu Fro Ile Ash Asp Tyr Thr Glu Ash Bly Ile Glu Fhe
- Ast Fro Met Teu Ast Glu Arg Gly Tyr Cys Cys Tie Tyr Cys Arg 200 186

Ari Oly Ash Ari Tyr Cys Ari Ari Vi. Cys lla Er. Leu Ieu Ely 205

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Arg Val Ile Met Pro Cys Asn Tip Tip Val Ala Arg Met Lou Gly 305

Arg Val

k.2105 323

< 211 · 1174</p>

<312 - DNA

 $< 213 + {\tt Homo}$  sapiens

<100 - 323

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ataccaaaga atgasaaaaa aaatootgto tattittgta titattatat 1910 atatitatut ugutgatita ataacaagit taatataaag tgactiggga 1170 gittggfoag iggggiiggi tigigatora agaafaaaco iiggggatgi 1150 ggotgittat gaasaaaaaa aaaa 1174

- -210° 324
- <0.111: 239</pre>
- +1212.+ FRT
- 40113 Homo sapiens
- 4400 3.4
- Met Al: Ser Thr Ala Val Gln Lei Leu Gly Fhe Leu Leu Ser Fhe
- Arg Arg Thr Ala His Val Gly Thr Asn Ile Leu Thr Ala Val Ser 45
- Tyr Leu Lys Gly Lou Trp Met Glu Cys Val Trp His Ser Thr Gly 60-66
- The Tyr Glr Cys Glr Ile Tyr Arg Ser Lou Leo Ala Leo Pro Glr -65
- Asp Leu Gl<br/>h Ala Ala Arg Ala Leu Met Val Ile Ser Cys Leu Leu H<br/>0  $^{-30}$
- For Gly Ile Ala Cys Ala Cys Ala Val Ile Gly Met Lys Cys Thr  $\pm 35$  100 101
- Arg Cym Ala Lys Gly Thr Pro Ala Lys Thr Thr Phe Ala Ile Leu  $110^\circ$   $115^\circ$   $120^\circ$
- Gly Gly Thr Leu Phe Ile Leu Ala Gly Leu Leu Cys Met Val Ala 125 \$130
- Val Ser Trp Thr Thr Asn Asp Val Val G)n Asn Phe Tyr Asn Fro  $140 \,$   $145 \,$   $150 \,$
- Leu leu Pro Ser Gly Met Lys Phe Glu Ile Gly Gln Ala Leu Tyr 185 160 160
- Leu Gly Phe Ile Jer Ser Ser Leu Ser Leu Ile Gly Gly Thr Leu  $170 \,$   $175 \,$
- Leu Cys Leu Ser Cys Gln Asp Glu Ala Fro Tyr Arg Pro Tyr Gln
- Ala Pro Fro Arg Ala Thr Thr Thr Thr Ala Ash Thr Ala Pro Ala 300 -205
- Tyr Glm Fro Erc Ala Ala Tyr Lys Asp Ash Arg Ala Ero Ser Val . 15 - 225

# Thi Ger Ala Thi His Sei Bly Tyr Ari Jen Ash Asp Tyr Val 130

<21' + 325 <211' - 212'i <212 - INA

∢21 ↔ Acmo sapiens

<4005 325 daustreest cagaagegeg thaqetteas acetteggea deaqqaqqqc 50 ggraydttot bycaggoggo agggoyggoy yccaggatoa tytycaccae 190 carataccas gragiggagt testectate naturinggar etgaccages 150 geategryge cacegggatg gaeatgtgga geaeceagga estytacgae 200 aaboocytoa botoogtytt oragtaegaa qogototoga uqayotqout 📶 🗀 gaugoayagt toaqqottoa onyaatgoaq qoootattto accatootyg 300 qanttocago catgotgoag graqtgogag coctgatgat ogtaggoato 350 gtoctqggtg coattggcot cotqqtaton atotttgccc tgasatgcat 400 counsityge agratydagd a totgeesa agodaaeaty Ahaetyacht  $4^{\circ}$ 0. couggateat giteatiste teaggistit sigeaatigs tygagistet 500 grytttadea adatgotggt dactaaette tygatgteda dagetaadat (100 gtacacegge atgggtggga tqqtgbagac tqttbagace aggtabacat ENO ttygtgegge tötgttegtg ggetgggteg etggaggeet cacactaatt 650ggyggtgtga tgatgtgcat cycotgoogg ggcotggoac cagaagaaac 700cauctacaaa gongiftott atdatgootd aggccacag: gttgootaca 150 ageotogagg offcaaggee ageactyget fitgggteeaa cachaaaaac RDD aaqaagatat acgatggagg tqcccgcaca gaggacgagg tacaatctta 850 toottocaag sacgactatg tgtaatgoto taagacetet cageaegggn 400 ggaagaaact occggagago toacccaaaa aacaaggaga toccatctag 450 atthritott joitiigast Racamotgga adfiadaaaa quotogafti 1800 natotitgga gaggecaaat ggictiages icagnoteid (bictaaa)a 1070. ttonaccata ayacagotda qttafttaty yaftiydaggo tatagotha: 1100 atiff matchingtatttot (ttilfaaat af worttot artistgatga 1173 damaangigg intraatain tehateasah hinsangann haganagan lekon Marti at tibilit kontradtiba lataaaa musigtoon jat jat jatusta ohtikuses jiholija ?

tahinggaad aadakittito adaggadada qitagabobad agatittirti  $1300\,$ ptotyctyti tgaattttgt otoccoacco poaacttggo tagtaarama 1350. cacttactya agaagaagca ataagagaaa gatatttgta atctotoosg 140 eccatgatet eggittitett acaetgigat ettasaagit accasacesa 1450 agroattite agittgaggo aabdaaabet tietastgot gittgacatet 1500 tottattada goaadaddat totaggagtt tootgagsts todactggag 1650 tostotttot gtogogggto agaaattgto ootagatgaa tgagaaaatt 1630 attitittita attiaagidd taaatatagi taaaataaat aatgittitag 1650tamaatgata cactatotot qtqaamtago etraecceta emiqtqqata 1700gaiggisatg aaaaaataat tyotttgaca ttytotatat gytactttyt 1750 adagtoatgo thaagtacaa attobatgaa aagotoacao otgtaatoot 1800 agoactttgg gaggotgagg aggaaggate acttgagees agaagttega 1850 gactagootg ggcaacatgg agaageeotg tetetacaaa atacagagag 1900 aaaaaatcag ccagtcatgg tggcatacac ctgtagtccc agcattccgg 1950 jayıctgagg tgggaggate acttqagece agggaggttg gggctgcagt 2000 qaquoatgat dacaccaetg caetholaged aggtgacata gegagateet 2050  $\gamma$ tofaaaaaa ataaaaauata aataatggaa cacaqcaagt ootaggaagt 2100aggitamasc tamitchtta a 21.11

## <400: 376

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Ser Thr Gln Asp Leu Tyr Asp Asn Pro Val Thr Ser Val Phe Gln 35 40 40

Tyr Glu Gly Leu Trp Arg Ser Cys Val Arg Gln Ser Ser Gly Phe 50 55 60

Thi Glu Cys Ard Pro Tyr Fhe Thr Ile Leu Gly Leu Fro Ala Met 65 76

Ieu Gin Ala Val Arg Ala Leu Mot Ile Val Gly Ile Val Ieu Gly

<sup>42.104 326</sup> 

<sup>0.:11. 261</sup> 

<sup>-1.11.1.</sup> PET

<sup>· ..13 -</sup> Homo sapiens

99,

Ala I.e Gly Leu Leu Val der Ile Fhe Ala Leu Lys dys Ile Arg
95 100 105

Ile G.y Ser Met Glu Asp Ser Ala Lys Ala Ash Met Thr Leu Thr
110 115

Cer Gly Ile Mot The Ile Val Ser Gly Leu Cys Ala Ile Ala Gly 125 130 130

Val Sør Val Phe Ala Ash Met Leu Val Thr Ash Phe Trp Met Sør 140  $$150^{\circ}$$ 

Thr Ala Asn Met Tyr Thr Gly Met Gly Gly Met Val Gln Thr Val 195 \$160\$

Gln Thr Arg Tyr Thr Ehe Gly Ala Ala Den Ehe Val Gly Trp Val 170 175

Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met Cys Ile Ala 195 -195

Cys Arg Gly Leu Ala Pro Glu Glu Thr Ash Tyr Lys Ala Val3er .000 -0.05

Tyr Hig Ala Ser Gly His Ser Val Ala Tyr Lys Pro Gly Gly Pwe . 15  $$\pm 2.0$ 

Lys A.A Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn bys Lys fle  $120\,$   $...40\,$ 

Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Gln Ser Tyr Pro...45 -250 ...55

Ser Ly/ His Asp Tyr Val 160

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1.1112 2010

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-213> Homo sapiens

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Phe Trp Glu Gly Leu Trp Met Asn Cys Val Arg Gln Ala Asn II- 50  $^{-5.6}$ 

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Ser Phe Leu Ala Phe Met Met Ala Ile Leu Gly Met Lys Cys Thr  $\underline{95}$   $-\underline{100}$ 

Arg Cys Thr Gly Asp Asn Glu Lys Val Lys Ala His Ile Leu Leu 110 115 1.0

Thr Ala Gly Ile Ile Phe Ile Ile Thr Gly Met Val Val Leu Ile 125  $$130\$ 

Fro Val Ser Trp Val Ala Asn Ala Ile Ile Arg Asp The Tyr Asn 140 145

Ser Ile Val Asn Val Ala Gl<br/>n Lys Arg Glu Leu Gly Glu Ala Leu 15° \$160\$

Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly Gly Ala 170 175 180

Leu Phe Cys Cys Val Phe Cys Cys Asn Glu Lys Ser Cer Ser Tyr 185 190 195

Ard Tyr Ser He Fro Ser His Ard Thr Thr Gln Lys Ser Tyr His 200 215 The Gly Lys By\* For Er? For Val Tyr Cor Arg Gor Gln Tyr Val 515 - 526

\*310 · 329

211\* 1315

<212 % INA

<2135 Himo sapiena

+4022 329

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 igithtyrta yrana 13% k
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1115 229
-21.1 - FRT
∙21⇔ Hrmo sapiens
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 Val Trp Glu Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly
 Gln Met Gln Cys Lyk Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln
 Asp bed Glin Ala Ala Ard Ala Leu Cys Val Ile Ala Leu Leu Val
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 Ala Leu Fhe Gly Leu Val Tyr Leu Ala Gly Ala Lys Cys Thr
                                     1.000
 Thr Cys Val Glu Glu Lys Asp Ser Lys Ala Arg Leu Val Leu Tuc
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 Val Cys Trp Thr Ala His Ala Ile Ile Arg Asp Phe Tyr Asn Pro
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                                     1.45
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 Leu Gly Trp Ala Ala Ser Gly Leu Leu Leu Gly Gly Gly Leu
                                     175.
 Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly Pro Ser H.s
 Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly
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                                  205
 Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val
7210× 331
<2.11 - 1161
4.112 - INA
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 gtamany.ma tygosittita topottycha attgotgggo tygitottyg 150
 uttocttjue atgitgygga etettgeese asecettetg eetesgtggt SDD
 grangtating cititigiting canceacatt attitioning against 1750
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 granuttota tageteetty trogetere egeetgeest ggaaabayee 350
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<sup>7210× 332</sup> 

<sup>&</sup>lt;.111 \* 173

<sup>&</sup>lt;212 % FFT

rulla - Homo Sapiéns

<sup>24116 .</sup> x32

Met Ash Dys Tie Ard Gin Ala Ard Val Ard Len Gin Cys Lys Hie

15 Ter for too led Ala tea Erd Fra Ala Led Slu Thr Ala Ard Ala Leu Met Cys Val Ala Val Ala Leu Ser Leu Ile Ala Leu Leu The Gly Hie Cys Gly Met Lys Gln Val Gln Cys Thr Gly Ser Asn Cla Arg Ala Lys Ala Tyr Leu Leu Gly Thr Ser Gly Val Leu Phe The Leu Thr Gly He the Val Leu He Pro Val Ser Trp Thr Ala Ash Ile Ile Ile Ang Asp Phe Tyr Ash Pro Ala Ile His Ile Gly Gln Lys Arg Gli Lou Gly Ala Ala Leu Phe Leu Gly Trp Ala Ser 110 1.20Ala Ala Val Lea Phe Ile Gly Gly Gly Lea Lea Cys Gly Phe Gys 1.25 130 Cys Cys Asn Arg Lys Lys Gln Gly Tyr Arg Tyr Pro Val Pro Gly 149 Tyr Arg Val Pro His Thr Asp Lys Arg Arg Ash Thr Thr Met Lou

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<213> Homo sapiens

Ser Lys Thr Ser Thr Ser Tyr Val

\*400% 333 aytyacaato teagageage ttetacaeca cagecattte cageatgaag 50 ateaetgggg gteteettet getetgtaca gtggtetatt tetgtageag 100 eteagaaget getagtetgt etecaaaaaa agtggaetge ageatttaca 150 aqaagtatee agtggtgee ateceetgee ceateaeata cetaceagtt 200 tytqgttetg actacateae etatgggaat gaatgteaet tgtgtacega 250 ganetigaaa agtaatggaa gagtteagtt tetteaegat ggaagttget 300 aaatticea tggabataga gagaaaggaa tgatattere ateatratet 300 tiatiatien alageatgae taagittisti teagttttae tgatgteeg 400 iii iiigaan alagimagat taagamaat httgaergaa tggagaaagt 400

tittuagao itoastaali aastaatito odaga (3)

217 314

211 - 85

112 + FRT

2130 Homo sapiens

4005 334

Most Lys Ile Thr Gly Gly Lea Lea Lea Lea Cys Thr Val Val Tyr 1  $\phantom{-}5\phantom{+}$  10  $\phantom{-}15\phantom{+}$ 

The Cys Ser Ser Ser Stu Ala Ala Ser Leu Ser Pro Lys Lys Val 20 25

Amp Cys Ser Ile Tyr Lys Lys Tyr Pro Val Val Ala Ile Pro Cys 35 40 45

Fro Ile Thr Tyr Leu Fro Val Cys Gly Ser Asp Tyr Ile Thr Tyr 50 60

Oly Ash Glu Cys His Leu Cys Thr Glu Ser Leu Lys Ser Ash Gly 65 75

Arg Val Gln Phe Lea His Asp Gly Ser Cys 80

4210± 335

2111 742

- 212> INA

1213> Homo sapiens

<400> 339

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- 211 - 148
+31. + FRT
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 K⊇t Ala Ala Ser tro Ala Arg Pro Ala Val Leu Ala Leu Thr Gly
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 Gly Ash Lys Len Lys Leu Met Leu Gln Lys Ard Glu Ala Pro Val
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 the Leu Gly Ser Leu Lys Arg Gla Lys Arg Gla Leu Trp Asp Arg
 Thr Arg Fro Glu Val Gln Gln Trp Tyr Gln Gln Phe Leu Tyr Mot
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<2130 Homo sapiens</pre>
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  or Val Leu Ala Cys Leu Leu Val Leu Ala Leu Ala Trp Val Ser
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The Him The Ale Wee My My Asp Fro Lee Fro Gln Fro Ser Gly

Thi P: The Fro Ser 31m Fro Ser Ala Ala Met Ala Ala The Acp Ser Met Arg Gly Blu Ala Fro Gly Ala Glu Thr Fro Ser Leu Arg His Arg Gly 3ln Ala Ala Gln Pro Glu Fro Ser Thr Gly Phe Thr Ala Thr Pro Pro Ala Pro Asp Ser Pro 3ln Glu Pro Leu Val Leu Arg Leu Lys Phe Leu Asn Asp Ser Glu Gln Val Ala Arg Ala Trp 115 Pro His Asp Thr Ile Gly Ser Leu Lys Arg Thr Gln Phe Pro Gly Arg Glu Gln Gln Val Arg Leu Ile Tyr Gln Gly Gln Leu Leu Gly 140 Asp Asp Thr Gln Thr Leu Gly Ser Leu His Leu Pro Pro Asn Cys 155 160165 Val Leu His Cys His Val Ser Thr Arg Val Gly Pro Pro Asn Pio Pro Cys Fro Pro Gl $\gamma$  Ser Glu Pro Gl $\gamma$  Fro Ser Gl $\gamma$  Leu Glu Ile Trp Tyr Cys Gln Ile Gln Tyr Arg Pro Phe Fhe Fro Leu Thr Ala Thr Leu Gly Leu Ala Gly Phe Thr Leu Leu Leu Ser Leu Leu Ala ...0 235 Fhe Ala Met Tyr Arg Pro 245

 $+:210 \times 339$ 

·:::11 · 849

4212+ DNA

<213 - Homo sapiens

< 400: 339

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# <:100> 340

Met Thr Lys Ala Leu Leu Ilo Tyr Leu Val Ver Ser She Leu Ala 1 5 10 15

Leu Ash Gln Ala Ser Leu Ile Ser Ard Cys Asp Leu Ala Gln Val 25  $\pm 20$ 

Leu Gln Leu Glu Asp Leu Asp Gly Phe Glu Gly Tyr Ser Leu Ser 35 40 45

Asp Trp Leu Cys Leu Ala Phe Val Glu Ser Lys Phe Ash Ile Ser 55 60

Lys Ile Asn Glu Asr. Ala Asp Gly Ser The Asp Tyr Gly Leu Fhe 65 70 75

Gln Ile Asn Ser His Tyr Trp Cys Asn Asp Tyr Lys Ser Tyr Ser 85 - 90

Glu Ash Iou Cys His Val Ash Cys Gln Ash Led Leu Ash Fro Ash

Leu Leu Ala Gly I.e His Cys Ala Lys Arg Ile Val Ger Gly Ala 110 115

Ari Gly Mot Ash Ash Trp Val Glu Trp Ari Lou His Cys Cor Gly

Ard Fro Lea Ger Tyr Trp Lea Thr Rly Mys Ard Lea Arg

<sup>&</sup>lt;310> 340

C.:11> 148

<sup>&</sup>lt;::12> PRT

<sup>11213&</sup>gt; Homo sapiens

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JUL 190 744
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r. 10 - 345
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\*210 347 < 211 > 639 MEIZ - FRT <2135 Homo sapiens <400 > 347 Met Leu Leu Arg Lys Ard Tyr Arg His Ard Err Cys Arg Leu Gln 1.) the Lea Leu Leu Leu Leu Met Leu Gly Cys Val Leu Met Met Val Ala Met Leu His Fro Pro His His Thr Leu His Gln Thr Val Thr Ala Gln Ala Ser Ly\* His Ser Pro Glu Ala Arg Tyr Arg Leu Asp Phe Gly Glu Ser Gin Asp Trp Val Leu Glu Ala Glu Asp Glu Gly Glu Glu Tyr Ser Pro Leu Glu Gly Leu Pro Pro Phe Ile Ser Leu Arg Glu Asp Gln Lou Let Val Ala Val Ala Leu Fro Gln Ala Arg Arg Ash Gln Ser 31r. Gly Ard Arg Gly Gly Ser Tyr Arg Lei I:0 115Lys Gln Pro Arg Arg Gln Asp Lys Glu Ala Pro Lys Arg Asp Trp 1200 -1.300Gly Ala Asp Glu Asp Gly Glu Val Ser Glu Glu Glu Glu Leu Tar 140 1.45 Fro Phe Ser Leu Asp Pro Arg Gly Leu Glm Glu Ala Leu Ser Ala Arg Ile Pro Leu Glm Arg Ala Leu Pro Glu Val Arg His Pro Leu 1 ~ " 15.0 Cys Leu Gln Gln His Fro Gln Asp Ser Leu Pro Thr Ala Ser Val 1.20185 He Leu Cys Phe His Asp Glu Ala Trp Ser Thr Leu Leu Arg Thr Val His Ser Ile Leu Asp Thr Val Fro Arg Ala Phe Leu Lys Glu Ile Ile Leu Val Asp Asp Leu Ser Gln Gln Gly Gln Leu Lys Ser

Alle for Cer Glu Tyr Val Ala Arg Len Glu Gly Vil Tys Len Leu .45  $$\rm 250$ 

Arg	Ser	Asr.	Lys	Arg Séo	Leu	417	Ala	114	Arī Pēē	Ala	Ar i	Μęţ	Leu	71.7 24.8
Ala	Thr	Arq	Ala	Thr 375	Gly	Asp	7:1	Leu	Val 183	F.F.	Medi	Asr-	Alā	His 185
C;s	Glu	Суя	His	Frc Jan	Glÿ	Trp	Leu	Glu	Ero 295	Leu	Leu	Ser	Arg	11e 300
Ala	Gly	Asp	Arg	Ser Bus	Arg	Val	Val	Ser	Pro 310	Val	Ile	Asp	Val	Ile 315
Asp	Trp	L78	Thr	Pho 3.10	Gln	Tïr	Tyr	Fre	Ser 325	Lys	Asp	Leu	Gln	Arq 330
Gly	Val	Leu	Asp	T:p	Lys	Leu	Asp	Phe	Hi2 340	Trp	Clu	Fre	Leu	Frc. 345
3lu	His	Val	Arg	$\frac{\log z}{\beta^4, 0}$	Ala	Leu	Gln	Ser	11 mm 3 0 m	He	Ser	Pro	Ile	Arq 350
Ser	Pro	Val	Val	P:0	Gly	Glu	Val	ΙέΛ	Ala 370	Met	Asp	Arq	His	Ty1 375
Phe	Gln	Asn	Thr	13.) <u>y</u> 12.0	Ala	Туг	Asp	Ser	Le:: 385	Met	Ser	Leu	Arg	3.10 GT2
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Asn	Gln	Asp	Ser	H1E 41:E	Ser	Pro	Leu	Азр	Gln 430	Glu	Ala	Thr	Leu	Arg 435
Asn	Arg	Val	Arg	11e 440	Ala	Glu	Thr	Trp	Leva 445	Gly	Ser	Fhe	Lys	Glu 450
'Thr	Phe	Tyr	Lys	H3 4 ! + !	Ser	Fro	Glu	Ala	Phi 4 Độ	Ser	Leu	Ser	Lys	Ala 465
Glu	Lys	Pro	Asp	Cyc. 470	Met	Glu	Arg	Leu	Gin 475	Leu	Gln	Arg	Arg	Leu 480
Gly	Суѕ	Arg	Tt.r	Fl.e 485	His	Trp	Phe	Leu	Ala 4 +0	Asn	Val	Tyr	Pro	Gi u 495
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 His Trp Asp Phe Gln Glu Asn Gly Met Ile Val His Ile Leu Ser
                   540
                                          595
 317 Lys Cys Met Glu Ala Val Val Gln Glu Asn Asn Lys Asp Leu
                   605
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 Fyr Leu Arg Fro Cys Asp Gly Lys Ala Arg Gln Gln Trp Arg Fhe 625 625
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<sup>&</sup>lt;210> 352

<sup>&</sup>lt;2111-243

<sup>4.120</sup> FRT

<sup>&</sup>lt;213 - Home sapiens

<sup>. 400 . 352</sup> 

Met Ard Fro Gin Gly Fro Ala Ala Jer Fro Gin Arg Leo Ard Gly

Leu Lêu Leu Leu Leu Leu Glo Leu Pr. Ala Fr. Sor Sor Ala Per Glu Ile Pro Lys Cly Lys Gln Lys Ala Gln Le $\mu$  Arg Gln Arg Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Ash Val Ile Ero Gly Thr Pro Gly Ile Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys Gly Glu Cys Leu Arg Glu Ser Phe Glu Glu Ser Trp Thr Pro Am Tyr Lys Gla Tys Ser Trp Ser Ser Leu Avn Tyr Gly Ile Asp Leu Gly Lys Ile Ala Glu Cys Thr Phe Thr Lys Met Arg Ser Asm Ser Ala Leu Arg Val Leu Phe Ser Gly Ser Leu Arg Leu Lys Cys Arg Asn Ala Cys Cys Gir Arg Trp Tyr Phe Thr Fhe Asn Gly Ala Gir Tys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile Tyr Leu Asp Glr. 1.70 Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg Thr Ser 190 .85 Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu Val Asp Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr Pro Lys Gly Asp

Leu Pro Lys

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Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Ile Glu Glu

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<sup>·1:10&</sup>gt; 353

<sup>&</sup>lt;.11> 480

<sup>&</sup>lt;.12> DNA

<sup>&</sup>lt;a>C13> Homo sapiens

<sup>440&</sup>gt; 353

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<.112 + PET

<.113 Homo sapiens

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Glu Gly Pro Val Glu Ser Thr Ser Pro Gly Arg Glu Fro Val App 50 55

Thr Gly Pro Pro Ala Pro Thr Val Ala Pro Gly Pro Glu Asp Ser 65 70 75

Thr Ala Gln Glu Arg Leu Asp Gln Gly Gly Gly Ser Leu Gly Pro

Gly Ala Ile Ala Ala Ile Val Ile Ala Ala Leu Leu Ala Thr  $\mathbb{C} rs$  95 100

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F.:11 + 2134

<..123 DNA

<2135 Home sapiens</pre>

<400 × 355

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ithdaceagh gacgailigg daeligeaty ghimtlittain tilyintiin 100

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Fhe Tyr Arg His His Val Asn Phe Lys Ser Trp Trp Val Gly Asp  $\frac{35}{15}$ 

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Met Lys Glu Leu His Leu Ala Ile Pro Ala Lys Ile Thr Arg Glu 65 -70 -76

Lys Leu Asp Gln Val Ala Thr Ala Val Tyr Gln Met Met Asp Gln 80 85 30

Leu Tyr Gln Gly Lys Met Tyr Phe Pro Gly Tyr Phe Pro Asn Glu

Leu Arg Asn Ile Ehe Ard Glu Gln Val His Leu Ile Gln Asn Ala 110 115 120

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<sup>&</sup>lt;210> 356

<sup>· 211&</sup>gt; 157

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;21 → Homo sapiens

14) 11°

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Thr Cys Glu Leu Ala Ala Glu Val Ala Ala Glu Val Glu Lys Ser 20 25 30

Ser Asp Gly 1ro Gly Ala Ala Gln Glu Fro Thr Trp Leu Thr Asp 35 40 45

Val Ero Ala Ala Met Glu Phe IIe Ala Ala Thr Glu Val Ala Val 50 55

Ile Gly Phe Fhe Gln Asp Leu Glu Ile Fro Ala Val Pro Ile Leu 65 7)

Ris Sor Met Val Gln Lys Phe Pro Gly Val Ser Phe Gly Ile Ser 80  $^{\circ}$ 

Thr Asp Ser Glu Val Leu Thr His Tyr Asn Ile Thr Gly Asn Thr 35

Ile Cys Leu Phe Arg Leu Val Asp Asn Glu Glu Leu Asn Leu Glu
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Asp Glu Asp Ile Glu Ser Ile Asp Ala Thr Lys Ieu Ser Arg Phe 125 130 135

Lie Glu Ile Asn Ser Leu His Met Val Thr Glu Tyr Asn Pro Val 140 145 150

Thr Val The Gly Leu Fhe Ash Ser Val The Gln The His Leu Leu 165 165

Leu Ile Met Ash Lys Ala Ser Pic Glu Tyr Clu Glu Ash Met His 170 - 180

Ard Tyk Kin Tyd Ala Ala Lyd Lew Fie Gli Kily Tye Ile Lew Fie 185

K2105 358

<sup>0211 - 273</sup> 

<sup>\*</sup>BL. · FFT

<sup>· 213</sup> Hemo sapiens

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 The the Lys Len Lys Glu Ser Glu Lou Fic Ala Leu Ala Ile Tyr
 G'r Thr Leu Asp Asp Glu Trp Asp Thr Leu Fr Thr Ala Glu Val
 Ser Val Glu His Val Gln Asn Pho Cys Asp Gly Pho Leu Ser Gly
 lys leu Leu Lys Glu Asn Aru Glu Ser Glu Gly Lys Thr Fro Lys
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... Homo sapiens

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Met Ala Ala Ser Ala Gly Ala Gly Ala Val Ile Ala Ala Pro Asp 1 5 10 15

Ser Arg Arg Trp Leu Trp Ser Val Leu Ala Ala Ala Leu Gly Leu 20 25 30

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<sup>&</sup>lt;310> 364

<sup>&</sup>lt;3115 269

<sup>&</sup>lt;2125 PET

<sup>...13</sup> Homo sapiens

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    Ile Gla Ash Met Gla Fhe Ile His Ash Gly The Tyr Ile
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Asr Val Lys Asn Ero Ero Asp Ile Val Val Gln Pro Gly His Ile
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hen Leu Ile Ser Mot Ile Len Ala Val Leu Tyr Ard Ard Lys Ash
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Ash Lys Ser Glu Ger Val Val Tyr Ala Asp Ile Ard Lys Ash
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€310.4 366
<311 + 373</pre>

<.:12: PRT

\*213 \* Homo sapiens

<400× 366

All Gly Leu Pro Fro Leu Gly His Gly Trp Val Gly Gly Leu Gly 
$$35$$
  $40$   $43$ 

Tip Ser Fro Gin The Fit Ala in Fro Type For Arg Cys Fhe Alg Ard Ala Ile Glu Ser Cer Ard Asp Leu Leu His Ard Ile Lys Asp Glu Val Gly Ala Fro Gly Ile Val Val Gly Val Ser Val Asp Gly Lys Glu Val Trp Ser Glu Gly Leu Gly Tyr Ala Asp Val Glu Asn Ard Val Pro Cys Lys Pro Glu Thr Val Met Arg Ile Ala Ser lle Ser Lys Ser Leu Thr Met Val Ala Leu Ala Lys Leu Trp Glu Ala Gly Lys Leu Asp Leu Asp Ile Pro Val Gln His Tyr Val Pro Glu Fhe Pro Glu Lys Gia Tyr Glu Gly Glu Lys Val Ser Val Thr Thr Ard Leu Ile Jer His Leu Ser Gly Ilé Ard His Tyr Glu Lys Asp The Lys Lys Wal Lys Gla Gla Lys Ala Tyr Lys Ala Leu Lys Met Met Lys Glu Arn Val Ala Phe Glu Gln Glu Lys Glu Gly Lys Ser Asn Glu Lys Asn Asp Phe Thr Lys Phe Lys Thr Glu Glu Ash Glu Ala Lys Cys Arg Ash Ser Lys Pro Gly Lys Lys Lys Ash [25] Asp Phe Glu Glr Gly Glu Leu Tyr Leu Arg Glu Lys Phe Glu Asn Ser Ile Glu Ser Leu Arg Leu Phe Lys Arn Asp Pro Leu Phe The Lys Pro Gly Ser Glm Phe Leu Tyr Ser Thr Phe Gly Tyr Thr Leu Leu Ala Ala Ile Val Glu Arg Ala Ser Gly Cys Lys Tyr Leu Asp Tyr Met Gln Lys Ile Fhe His Asp Leu Asp Met Leu Thr Thr Val Glm Glu Glu Asr Glu Er - Val Ilo Tyr Asr. Arm Ala Arm

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.11. - DNA
 2148 Artificial
 2.10
- xxl Artificial Sequence
- 2.2 + 1-30
- 2.3 Synthetic construct.
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 turaaaaqaa gtotggtoag aaggtttagg 30
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<sup>&</sup>lt;2105 37.1

<sup>&</sup>lt;311. 26+

<sup>&</sup>lt;.12 - PRT

<sup>&</sup>lt;013 + Homo sapiens</pre>

<sup>&</sup>lt;400× 372

Met Ala Ala Ala Ser Ala Gly Ala Thr Arg Leu Leu Leu Leu Leu 15

Deu Met Ala Val Ala Ala Ero Ser Arg Ala Ard Gly Ser Gly Cys 20 25

- GD. The Asp Asp Ser Ala Ash The Arg Lys Arg Gly Ser Leu Leu 45
- Try Ash Gln Gln Asp Gly Thr Leu Ser Leu Ser Gln Arg Gln Leu  $60^{\circ}$
- Ser Glu Glu Glu Arg Gly Arg Leu Arg Asp Val Ala Ala beu Asr.  $95\,$  105
- Gly feu Tyr Arg Val Arg ile Pro Arg Arg Fro Gly Ala Leu App 110 115 120
- Gly Leu Glu Ala Gly Gly Tyr Val Ser Ber Fhe Val Pro Ala Cys 1.25
- Sor Leu Val Glu Sør His Leu Sør Asp Gln Leu Thr Leu His Val 140 148 150
- Asy Val Ala Gly Asr. Val Val Gly Val Ser Val Val Thr His Pro 155 160 160
- Gly Gly Cys Arg Gly His Glu Val Glu Amp Val Asp Leu Glu Leu 170 - 175 - 180
- Phe Asn Thr Ser Val Glm Leu Glm Pro Pro Thr Thr Ala Pro Gly 185 140 195
- Pro Glu Thr Ala Ala Phe Ile Glu Arg Lou Glu Met Glu Gln Ala 200 ::05
- Tyr Trp Met Tyr Ile Ile Pro Val Val Leu Phe Leu Met Met Ser .330  $$\mathbb{R}^3$$
- Gly Ala Pro Asp Thr Gly Gly Gln Gly Gly Gly Gly Gly Gly 3.45
- Gly Gly Gly Ger Gly Leu Cys Cys Val Pro Pro Ser Leu  $260\,$
- <.110> 373
- <.:11:- 1706
- <..12> DNA
- <!!!! \*\* Homo sapiens</pre>
- <400× 373
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ctgettgget ettecetgta eegtategee aceteeaaga ggtaceaest 1050
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in Ala Leu the Gla Der Val Ile Phe Ile the Val the Deu Trp
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                 261
Contino Val Leu Asp Pro His Gly Ala Pro Leu Gly Ile Ile Phe
Cer Ser Phe Met Ala Ala Ser Leu Leu Gly Ser Ser Leu Tyr Arg
                                      _ ; · ) ⊑
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ite Ala Thr Ser Lys Arg Tyr His Leu Glr. Pro Met His Leu Leu
                                      310
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For Yeu Ala Val Leu Ile Val Val Ehe Ser Leu Ehe Met Leu Thr
                 3 = 3
the Ser Thr Ser Pro Gly Gln Glu Ser Pro Val Glu Ser Phe Ile
Ala Phe Leu Leu He Glu Leu Ala Cys Gly Leu Tyr Phe Pro Ser
Met Ser Phe Leu Arg Arg Lys Val Ile Pro Glu Thr Glu Gln Ala
                 365
Bly Val Leu Asn Trp Phe Arg Val Pro Leu His Ser Leu Ala Cys
Leu Gly Leu Leu Wal Leu His Asp Ser Aup Arg Lys Thr Gly Thr
                 C_{i} \subseteq C_{i} \subseteq C_{i}
                                      411Û
                                                            405
Arg Ash Met Phe Ser Ile Cys Ser Ala Val Met Val Met Ala Leu
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                 410
Leu Ala Val Val Gly Leu Phe Thr Val Val Arg His Asp Ala Glu
                 4.55
Leu Arg Val Pro Ser Pro Thr Glu Glu Pro Tyr Ala Pro Glu Leu
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<sup>&</sup>lt;.210> 375

<sup>&</sup>lt;.:11> 1098

<sup>&</sup>lt;.212> DNA

<sup>&</sup>lt;213> Artificial

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# <400> 376

Met Val Pro Gly Ala Ala Gly Trp Cys Cys Leu Val Leu Trp Leu

1 5 10 15

Fro Ala Cys Val Ala Ala His Gly Phe Arg Ile His Asp Tyr Leu  $20 \\ 25 \\ 30$ 

Tyr Phe Gln Val Leu Ser Pro Gly Asp Ile Arg Tyr Ile Phe Thr +35 45

Ala Thr Fre Ala Lys Asp Fhe Gly Gly Ile Phe His Thr Arg Tyr
'0 55 60

Giu Gln Ile His Leu Val Erc Ala Glu Erc Erc Glu Ala Cys Gly
65 75

The Let Cor Ash Gly Eho Eho Ile Gin Asp Gin Ile Ala Leu Val

<sup>&</sup>lt;010> 376

<sup>&</sup>lt;2112 188

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;:/1>> Homo sapiens

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Array Cys Ser The Leu Cer Lys Thr Array Val Val Sln 115

Array Cly Gly Array Ala Val Ile He Ser Asp Ash Ala Val Asp 116

Array Cer The Tyr Val Glu Met He Gln Asp Ser Thr Gln Array 125

Ind Ala Asp He Fro Ala Lou Fhe Leu Leu Gly Array Asp Gly Tyr 140

The Array Array Ser Leu Glu Gln His Gly Leu Fro Trp Ala He 151

Ile Ser He Fro Val Ash Val Thr Ser He Pro Thr Fhe Glu Leu 130
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Leu Gla Fro Fro Trp Thr Fhe Trp 185

- · 1:10 · 377
- .11: 496
- 212 + DNA
- <?13 · Artificial</pre>
- 4.220>
- <.121> unsure
- × .1212 + 396
- + 223 unknawn base
- < 100 > 377
- <110> 378
- · 211 · 116
- · Plz· HPT
- 4.1++ H mc sapiens
- + 41 + 35 A

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  11) Fr. 110 Gir. Try Gly The Leu Ash Leu Ash Lys Met Val Lys
  The Mai Th: Gly Lys Met Fro Ile Leu Cer Tyr Trp Pro Tyr Gly
 {\it C}\gamma^{\perp} His Cys Gly Leu Gly Gly Gly Gln Pro Lys Asp Ala Thr
  ast Trp Mys Cys Gln Thr His Asp Cys Cys Tyr Asp His Leu Lys
 The Gle Gly Cys Gly Ile Tyr Lys Asp Asn Asn Lys Ser Ser Ile
 Ris Cys Met Asp Leu Ser Glr Arg Tyr Cys Leu Met Ala Val Phe
 Asn Val lle Tyr Leu Glu Asn Glu Asp Ser Glu
<210 + 379
*.11* 24
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Edlar Artificial
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and Synthetic construct.
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<.'.l> Artificial Sequence
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AND Synthetic construct.
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+.10> 381
11 > 45
4..12 - DNA
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2.2 - 1-45

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- -21.5 PNA
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- " first "' coffetgiat gggggcodag ggggcocaig agagtataaa 50 agriatytur aggytgodog goadaaccay angodbagto anaggbgaga 100 uchofygyat goaccugoca gaggecator toptquiget caegettgoc 150 ctrofuguga gorocacrity gubagagaag atgitatagno otggaggagg 200 canalattic agraecanty asgantanga chargasath anaggyotgo .'bD qqqtqtctqt, aggtottqto otggtgaaaa gtgtccaggt gaaacttgga 300 gantoutugu augtuaaaot gggagootta ggtgggaata obbaggaagt 350 careefgeag ecaguegaat abateleawa agtettiqte gesttissaag 400 intitioctron gggtatggto atgtacacca goaaggacog ctattictat 450 ttigadaagu itgatagooa gathtootht yootaccoca gooaagaggg 500 goaggtghtg utgagcation atygecagta ticaactooth ugcaticaaga him. goattgqctt (qaatqgaat tafccactag aggagoogae cactgagooa 660 roughtaute tracatacte agramactem congregate gotagggtag 650 iggtatuguge eathedaget gaggecatet gtgtggtggt ggetgatggt 700 ustggagtaa ctgagtoggg acgotgaato tgaatocaco aataaataaa 750 qettetgeaq aaaa 764
- <1010≥ 383
- <211> 178
- <212> FRT
- 132 Hcmc sapiens
- 7400 \ 383
- Met His Arg Fro Glu Ala Mot Leu Leu Leu Leu Thr Leu Ala Leu 1 5 10 15
- Let Gry Gry Free Thr Trp Ala Gly Tys Met Tyr Gly Fro Gly Gly 30 25
- Gly Lys Tyr Fig Cer Thr Thr Gla Asp Tyr Asp His Glu Ile Thr 45 45

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And Wall Cer Wall Sly Lev. Lett Lev. Wall Lys Cer Wall Slx Cer Wall Sly Asp. Cer Try Asp. Wall Lys Leu Sly Alm Leu Sly Cer Try Asp. Wall Lys Leu Sly Alm Leu Sly Cer Try Asp. Wall Lys Leu Sly Alm Leu Sly Cer Try Asp. Wall Thr Leu Gln Fro Gly Glu Tyr He Thr Asp. Wall Fiber Wall Alm Fiber Gly Asp. Asp. Arg. Tyr Fiber Tyr Fiber Gly Lys Leu Asp. Gly Met Wall Liber Cer Ser Alm Tyr Fro Ser Gln Glu Gly Gln Wall Leu Wall Liber Wall Gly Arg.
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170

#400% 384
getqageqta tgegeggtas ggggetetec tgeettetag getesaacge 50
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atacaqatqt gucageteag gtagececaa attgeetgga agaatacate 150
atottiteg ataagaagaa attgtaggat ecaqttiti tittaacege 200
eccetececa eccecaaaaa aaactgtaaa gatgcaaaaa egtaatatee 250
atgaagatee tartacetag gaagattitg atgittiget gegaatgegg 300
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atqitecaaa ateqqiecai etoccaaqqi qtecaattit tetteetggg 400
tartaginga eccigactaa etacagiisa quigacaqqq getgteatge 450
aantushino taaqaraaaq caaaayand sagaacgac titgaacaat 500
acusesisti qattinaanq taattagget antgagegg teaqetgtag 110
aitisi an maasanta tagaraaaq caa

175

Fa16 + 384

<sup>- 2111 - 2379</sup> 

<sup>· 31/ ·</sup> LNA

<sup>·21 ↔</sup> Homo sapiens

ar it radama itta ragdaga itdgrid shaqitar at at at atta tilgib tilahti a xili s ningtungt togotätäso synningsa sampteama teatrauttt 150 oritatijan gaaaatgott ttaitigaat abgbagabte abagagotga e80 "" ""agito caatagaato tootattito fiaacaatao ottoagacot 900 ut macaaatt tabggaabtt ggatbtuteb tataarbage tybattetet and sinatotyaa caguitogyy wellgoyysa gelgelgagi itacattlac 1000 gitchaacto cotgagaaco atcoptigtuo gaatattoca agaptigoogo 1050 Hanningdaan tittigadest gagatuhaas ogyatermaa gittiagerag 1,03 ua Ediciti gotgycatga tradacicaa agaasiisas siggagcaca 1130 Atraattito caagetease etgqoeetri tineasggit ggibageett 1200 rawaaccttt acttqcagtq gaatawaatc agtgtcatag gacagaccat 1250 ಗಳುರ್ggaco tggagofcot facaaaggot tgatttatoa ggoaatgaga 1300 Toquagettt cagtqqacco agtqttttoc agtqtqtccc gaatctqcaq 1350 cocofia woo togantiroaa caabutraha tihattopho aagagantit 1400 gyattotigg afatocotca atgacutoug rottgotggg aatatatggg 145) aatgoagoag aaatatitjo tooottytaa actygotyaa aajittiaaa 1500 ygtotaaggg agaafacaat tatotgtgoo agtoocaaag agotgcaagg 1550 agtamatgty atogatycag tgamqamata cagcatotyt ggommagta 1600 ctacagagag gittgatotg ghoagggoto fochaaagho gangittaag 1650 rochaagotoo ocaggoogaa gwatgagago kaacoocott tgooccegab 1700 ggtgggaqoc acagagocog ymchagagac ugatgotgac googagoaca 1750 fötötttona taaaathato änggqoagog tagogottti ootgtöogta 180) intrigitioanico igotajittan ohanganitus igasagoggi accontgogag 1850 ratgaagdag otgoagdagd gotordtoat gogaaggdad aggaaaaaga 1900 satistatic cofaaagnaa atgantooni goacoolagga attttatita  $19^{\circ}$  0 yattataaac ocaccaacaa ggagichaga gagatgotgo tgaatggqac 2010 ddiannot ic achtataaca aith iggitii cagligabtat daggtatdaa 2010 Minit Kilat lahang makalist opporating in diginah mag tijitgiti na Li 🤚

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..... 513

<213 - PRT

213 Homo sapiens

· 400 385

Mot Gly Phe Ash Val Ile Ard Leu Leu Ser Gly Ser Ala Val Ala

Leu Val Ile Ala Fro Thr Val Leu Thr Met Leu Ser Ser Ala

Glu Ard Gly Cys fro Lys Gly Cys Arg Cys Glu Gly Lys Met Val

Tyr Cyc Glu Ser Gin Lys Leu Gln Glu Ile Pro Ser Ser Ile Ser

Ala Gly Cys Leu Gry Leu Ser Leu Arg Tyr Asn Ser Leu Gln Lys

Leu Lys Tyr Asn Gln Phe Lys Gly Leu Asn Gln Leu Tnr Trp Leu

Tyr Len Asp His Asm His Ile Ser Asm Ile Asp Glu Asm Ala Phe

Ash Cly Ile Ard Ard Leu Lys Glu Leu He Leu Ser Ser Ash Ard 115 110

Ile Ser Tyr Phe Leu Asn Asn Thr Phe Arg Pro Val Thr Asn Leu

Arg Ash Leu Asp Leu Ser Tyr Ash Gln Leu His Ger Leu Gly Ser 140145

Glu Gln Phe Arg Gly Len Ard Lys Leu Leu Ser Leu His Leu Arg 160

der Asn Ser Leu Arg Thr Ile Erd Val Arg Ile Ehe Glm Asp Cys

Art Ast. Leu Sli Leu Leu Asp Leu Gly Tyr Asn Art lle Atg Ser 195

teu Ala Ard Ash Val The Ala Sly Mc: The Ard Teu Lyc Glu Lep

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Ftc	Ser	Val	∃he	Gln 75	Cys	Val	Fro	Asn	Lou Zen	Gln	Arq	Leu	Asn	Leu 285
Asţ	Fer	Asn	Lys	Leu . 30	Thr	Fhe	Ile	G17	Gln 2H5	Glu	Ιlę	Leu	Asp	S⊷t } !:j
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Lys	Gly	Leu	Arg	Glu 535	Asn	Thr	lle	Ile	Cys 340	Ala	Ser	Ero	Lys	131u 345
Leu	Gln	Glÿ	Val	Asn 350	Val	Ile	Asp	Ala	Val 3	lys	Asn	туг	Ser	Ile 360
Cys	Gly	Lys	Ser	Thr ,s	Thr	Glu	Arg	Phe	Asp 370	Leu	Ala	Arg	Ala	Len 375
Pro	Lys	Fro	Thr	Phe -80	Lys	Pro	hys	Leu	P:0 385	Arg	Pro	Lys	His	G1 u 3 +0
Ser	Lys	Pro	Fro	Leu 395	Pro	Pro	Thr	Val	61y 400	Ala	Thr	Glu	Pro	G17 405
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Ile	Ala	Gly	Ser	Val 425	Ala	Leu	Fhe	Leu	Ser 430	Val	Leu	Val	Ile	Leu 435
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 12.24 Artificial Sequence
 1223 - Synthetic construct.
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<1.100 589
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+11121: DNA
*213> Homo sapiens
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atgittitggo omtitaqqot ompoarmino ataitgaaqaa atigitalaaa 500-
manctuatt tragitytyy attatematt tanagtatta argamentety 650
faattobaaa abatbaaatt taggaatagt tatttoagtt gitggaaatg 600
rocagagato tattiatata unishunugaa yumbhattiso agaagagaat 650.
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ctiacaaatt tyttyaacaa aacaataaac atcaatagat atctaaaaa 1449
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<sup>- 210 → 390</sup> 

<sup>&</sup>lt;.:11 > 146

<sup>&</sup>lt;2122 PRT
</pre>
<212 + Home sapiene</pre>

<sup>44 . 343</sup> 

Met Cer Ard Cer Ard Lev Phe Cer Val Thr Cer Ald Ile Cer Thr

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Lie Lew Tys Ieu Frie Lou Ebe Sit Ieu Val leu Ser Asp
          Dys Glu Glu Asp Glu Met Cys Val Asn Tyr Asn Asp Gln
          Ash Gly Trp Tyr He Trp He Leu Leu Leu Val Leu
 var mad Ala Leu Leu Cys Gly Ala Val Val Leu Cys Leu Gln Cys
         Arg Arg Pro Arg Ile Asp Ser His Arg Arg Thr Met Ala
 It. The Ala Val Gly Asp Len Asp Ser Ile Tyr Gly Thr Glu Ala
 Ala Val Ser Pro Thr Val Gly The His Leu Gln Thr Gln Thr Pro
 App for Tyr Fro Val Pro Ala Pro Cys Phe Gly Pro Leu Gly Ser
 Pro Fro Pro Tyr Gli Glu Ile Val Lys Thr Thr
                  14)
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1.2. 1-.6 27 Synthetic construct.
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Artificial
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1...'l: Ar*ificial Sequence
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.....3 Synthetic construct.
2400 39L
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· 210, 392
+111+49
-212+1MA
+713+Artiff*141
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220
+221 - Artificial Sequence
. 2.1. 1-47
<2235 Synthetic Senstruct.
400 393
coauttyjta eteteggise tabeatgegi agaagatgaa atgtgtg 47
<310> 334
<.111* 2340
<.12 DNA
<213 Home sapiens
100 = 3.4
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 aagotoogty geggegelya enytgamyaq aagomeaegg enagethäyt 200
 torettetae thigggagag agagaangto agatgecest titaaactoo 250.
 of ottoawaa ctoatotoot gggtgactga gttaatagag tggatacwab (00)
 ottgotgaag atgaagaata tacaatiitig aggatatiit titotittit 1500
 titicangin tigatityin gottaborioa agitachati titoagican 400\,
 ytotyttigt tiyotiotto agaaatytti titacaatot baagaaaaaa 450
 tatyforcay aaattgaytt tactyttyct tytatttyga cicatttygy 500
 gattgatgtt actgcactat acttttcaac aaccaagaca tcaaagcagt 50
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 tetagcagag gaawataaga whacagtgga tgtegagawn gutgetteta 🗝 🖰
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 attitgsaas gattggtgaa gotggagaas aaagttgast atattgttgt 750
 gaatggotca gcagocaaca coaceaatgg tactagtggg aatttygtgo 800
 cagtaachac aaataaaaga acgaatgtot coogragtat cagatagcag 850
 tigaaaaida oortgigoig olooalodad igiggallat aloolatago unfi
 agaaaagott tataattgot ygottagqad agagcaatad tttacaataa 250
 aagotetana cattiticaag gagtatgeto gattnatoga actotaatto 1000
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wat potyrus inutor cotta laagadaartti pota kirtiya it pututost 11%

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angragatan digagirithy taitaagiritt ittybuttiga yathaagirg 1167
 aratbaasan amijaawaan utggatimat tiotataana oatitattia 1200
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 tqcttaftit abtätafttt qttattocaa ttatqaqcaq aqaaaqqaaa 1950-
 tataatgttg asaataatgt titgasatca tgacccaasg aatgtattga 1400
 tttgcactat cottcagaat aactgaaggt taattattyt atattittaa 1450-
 aaattacast tataagagta taatsttyaa atyggtagsa gocactutos 1500.
 Attacctate gradacatty ggggaattia ataacadeat taaaaatagtt 1550.
 gtaaactota atottatao: tattgaaria taaaagatat tittatuatu 1600
 agagtaacaa taaagtatto atqattttto abatabatga atgittoatti 1650.
 aaaaqtttaa tootttyaqt qtotatqota toaqqaaaqc acattattto 1\,\%\%
 catatitegg traattitec tittattata itegetotaga aggaagggac 17\%
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 taottitgig ofgoattaaa tigotiggaa agigtisasa tiafatrafa 1850.
 taagagtaro otttatgaaa tittgaatti giataabaga igoattagai 1400.
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 tatttattet etatagtaae tgettäagtg cageragett etagätttag 2150
 actatataga atttagatat tgtattgttc gtcattataa tatgctacca 1300
-catgtagcaa taattacaat attttattaa aatagatatg fyaaatattg 1250
itticatgasa gacagatite casatireets tretoticte :qtactgret 2:300
acceptatyt gaagaaatta attatatore attgebaggt 2340
<510 > 395
< 11 - 140
CUIZA PRT
<.13 Home sariers</pre>
240F. 305
Met Fhe Fhe Thr Ile Jer Ard Lys Aun Met Jer Fln Lys Leu Jer
1
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- is a Leo Leo Leo Val The Fly fou illo Try Gly Leu Mat is a low  $\mathbb{R}^3$
- And Glu Gln Ile Leu Asp Leu Ser Lys Arg Tyr Val Lys Ala Leu  $50^\circ$  .  $55^\circ$
- Ala Glu Glu Asn Lys Asn Thr Val Asp Val Glu Asn Gly Ala Ger -70
- Met Ala Gly Tyr Aia Asp Leu Lys Arg Thr Ile Ala Val Leu Leu 80 85
- Asp Asp Ile Leu Gin Arg Leu Val Lys Leu Glu Asn Lys Val Asp 100 105
- Tyr Ile Val Val Ash Gly Ser Ala Ala Ash Thr Thr Ash Gly Thr 110 115 120
- Der Gly Asn Leu Val Pro Val Thr Thr Asn Lys Arg Thr Asn V41
- Ser Gly Ser Ile Arg
- <310> 396
- <...11> 2639
- < 112> DNA
- < 213> Home sapiens
- <403> 396
- -congressing cognograph gagesties aggregation agreement 50
- tosagesees accatgoogt lygosestyst getgetgsty geogtgagty 100
- gggoodagad aacdoggood tgottoocog ggtgoodatg ogaggtggag 150
- accttogged tittogadag citoagodig actogggigg attgtagogg 200
- cotgggedes canateatge nggtgedeat ecototggae abagerdabt 250
- tggacetgte etceaacego etggagatgg tgaatgagte egtgttggeg 300
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Met Pro Trp Pro Leu Leu Leu Leu Leu Ala Val Ser Gly Ala Gl  
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Thr Thr Arg Pro Cya Phe Pro Gly Cys Gln Cys Glu Val Glu Thr 20 25 30

Fhe Gly Leu Phe Amp Ser Phe Ser Leu Thr Arg Val Amp Cys Sår 40

Gly Leu Gly Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr

Ala His Leu Asp Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu  $\overline{65}$   $\overline{70}$ 

Ser Val Leu Ala Gly Pro Gly Tyr Thr Thr Leu Ala Gly Leu Agp 80 85 30

Leu Ser His Asn Leu Leu Thr Ser Ile Ser Pro Thr Ala Phe Ser 95

Arg Leu Arg Tyr Leu Glu Ser Leu Asp Leu Ser His Asn Gly Leu 110 115 120

Thr Ala Leu Pro Ala Glu Ser Phe Thr Ser Ser Pro Leu Ser Asp. 135

Van Ash Lou Cer His Ash Glin Leu Arg Glu Val Cer Val Cer Ala 140 - 151

<sup>&</sup>lt;5.10% 397

<sup>4211 353</sup> 4211 353

<sup>&</sup>lt;:12 \* FRT</pre>

<sup>4..13</sup> Homo sapiens

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<400 - 402

Met Arg Gln Phe Pro Lys Thr Ser Phe Asp Ile Ser Pro Glu Met

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Ser Pho Cer Ile Tyr Ser Leu Gln Val Pro Ala Val Pro Gly Leu 20 25 30

Thr Cys Trp Ala Leu Thr Ala Glu Pro Gly Trp Gly Gln Asn Lys +5  $-4^{\circ}$ 

Cly Ala Thr Thr Cys Ala Thr Asn Ser His Ser Asp Ser Glu Leu 50 55 60

Ard Fre Glu Ile Fhe Ser Ser Arg Glu Ala Trp Gln Phe Fhe Leu

Leb Lev. Tip Ser Fi Asp The Arg Fro Typ Met Lys Ala Ser Ser

<sup>· 210 &</sup>gt; 402

<sup>&</sup>lt;.11 + 261

<sup>&</sup>lt;..12 · PRT

<sup>&</sup>lt;:13 · Homo sapiens</pre>

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In Photoer Leg Leg Cor Ala Ala Pho Tyr Leg Leg Trp Thr
       r Thr Gly Leu Lys Thr Leu Ash Iou Gly Ser Cys Val Ile
110 - 115 - 120
     "In Ash beu Gln Glu Ile Arg Ash Gly Phe Ser Glu Ile Arg
 Gly for Val Glm Ala Lys Asp Gly Asm Ile Asp Ile Ard Ile Leu
                  140
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 ... Ing Thr Glu Ser Leu Gln Asp Thr Lys Pro Ala Asn Arg Cys
                                       160
 (y) .ou Leu Arg His Leu Ieu Arg Leu Tyr Leu Asp Arg Val Phe
 ta- Ach Tyr Gln Thr Pro Asp His Tyr Thr Leu Arg Lys Ile Ser
 Car You Ala Ash Ser Phe Leu Thr Ile Lys Lys Asp Leu Arg Leu
 Der His Ala His Met Thr Cys His Cys Gly Glu Glu Ala Met Lys
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 Ala Ala Val Val Lys Ala Leu Gly Glu Leu Asp Ile Leu Leu Gln
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1.21> Artificial Sequence
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<sup>₹210 - 406</sup> 

<sup>+211 + 323</sup> 

<sup>+212 +</sup> ERT

<sup>&</sup>lt;21 - Hemi sapiens

<sup>+461 + 4.6</sup> 

Met Jer Val Er, Blu Glu Glu Glu Ard Leu Eeu Ero Leu Thr Glu

The Fr. Art Ala Der Typ Blo Den Lem Cer Kly Cys Ala Ala of Alighe Lou Alighter the Fro Let Asp Leu Thr Lys Thr Fig. 100 film Mgt Glm Gly Glm Ala Ala Leu Ala Arg Leu Gly App Gly Ala Arg Glu Ser Ala Fro Tyr Arg Gly Met Val Arg Thr Ala Less boy libe lie Blu Glu Glu Gly Fhe Les Lys Leu Trp Gln Bly The The Ero Ala Ile Tyr Arg His Val Va: Tyr Ser Gly Gly Arg 1) ) Mot day Thr Tyr 3ld His Leu Ard Glu Val Val Phe Gly Lys Jer Gl: Asp. Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly Met Met Ala Gly Val The Gly Gln Fhe Leu Ala Ash Pro Thr Asp ben Val Lys Vai Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Hy Lys in them And Phe And Gly Val His Hi: Ala Phe Ala Lys lie 170 Lou Ala Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val Pro 1 4:-Asn The Gln Arg Ala Ala Leu Val Asn Met Gly Asp Leu Thr Thr 300 Tyr Asp Thr Val Lys His Tyr Leu Val Lee. Asn Thr Pro Leu Glu Val Ala Ser Ile Leu Gly Thr Fro Ala Acp Val Ile Lys Ser Arg

The Met Jer Les Tyr Lys Gly The Louiro Ser Trp Les Ard Met 29.

The Met Asn Gln Frc Ara Asp Lys Gln Gly Arg Gly Leu Leu Tyr

Lyr Fer Fer Ehr Asp Cys Leu Ile Gin Ala Val Gln Gly Glu Gly

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222 1-34

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216 - 409

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<212 - PNA

4713 · Homo sapiens

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otdiataatg attuatucid otgtugtyta tootaagooa gaacagttya 300

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<.110 ~ 410

<311> 158

<212> FRT

<.113 > Homo sapiens

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Met Ala Gly Fhe Leu Asp Ash Fhe Ard Trp Fro Glu Cys Glu Cys 1 5 10 15

lle Asp Tip Cer Glu Arg Ary Ash Ala Val Ala Cer Val Val Ala 20 25 30

Fig. 11e Leu Fhe Fhe Thr Gly Trp Trp Ile Met Ile Asp Ala Ala 48

Val Val Tyr Fro Lys iso Glu Sin Leu Ash Ris Ala Fhe His Thr

The Sig Wellike Yes The Lew Alaikho ike Met lie Arn Ala Val

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I'r Ach Ala Th Val Ara Gly Asp Yor lyr the fer Gly Tys Leg
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 " The Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Fhe Gly Ala
 Tyr Val Thr Olm Ash Thr Asp Val Tyr Pro Gly Ion Ala Val Phe
 ing Gln Ash Ala Leu Ile Fhe Phe Ser Thr Leu 11e Tyr Lys Phe
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 31; Ard Thr Glu Glu Leu Trp Thr
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 Met Lys Thr 110 Arg Leu Fro Arg Tip Leu Ala Ala Ser Fro Thr
 bys Glu He Glo Val Lys Lys Tyr Lys Cys Gly Leu He Lys Fro
 Cy. Fro Ala Ash Tyr The Ala Phe Lys Ile Cys For Gly Ala Ala
 Asn Val Val Gly Pro Thr Met Cys The Glu Asp Arg Met Ile Met
 Ser Pro Val Lys Ann Asr Val Gly Arg Gly Leu Asn Ile Ala Leu
                                      100
 Val Asn Gly Thr Thr Gly Ala Val Leu Gly Gln Lys Ala Ehe Asp
110 115
 Met Tyr Ser Gly Asp Val Met His Leu Val Lys Fhe Leu Lys Glu
                 175
                                  130
 The Pre-Gly Gly Ala Leu Val Leu Val Ala Ser Tyr Asp Asp Pro
                                     145
                 140
 Gly Thr Lys Met Ash Asp Glu Ser Arg Lys Leu Fhe Ser Asp Leu
                 3 0,5
 Gly Ser Ser Tyr Ala Lys Gln Leu Gly The Arg Asp Ser Trp Val
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 The Leu Lys Asn Ser Fre Asp Thr Asn Lys Tyr Glu Gly Trp Fre
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 Oli Lon Lou Glu Met Glu Gly Cys Met Fro Fro Lys Fro Ehe
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× 210 × 41€
111-21
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22

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416
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- 110 - 413
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12.30 Synthetic construct.
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Asp His Trp Fro Ala Ser Tyr Fro Glu Cys Gly Asn Asn Ala Gln
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Ila	∀al	His	Tyr	Asp 1;0	Ser	Asp	Ser	Tyr	Asp 145	Ser	Leu	Ser	Glu	Ala 150
Ala	Glu	Arg	Pro	Glm 155	Gly	Leu	Ala	Val	Leu 160	Gly	Ile	Leu	Ile	Glu 165
Val	Gly	Glu	Thr	1,73 1 9	Asn	Ile	Ala	Tyr	Glu 175	His	Ilē	Leu	Ser	His 150
Leu	His	Glu	Val	Arg 185	His	Lys	Asp	Gln	Lys 190	Thr	Ser	Val	Pro	Pro 1.45
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Ala	Gln	Ala	Thr	Thr 335	Glu	Ala								

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Thr led Gly Fre Asp led His Led Led Ast Fre Ala Ala Gly Met

<sup>2.110&</sup>gt; 4.9

<sup>&</sup>lt;211> 2 19

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Homo sapiens

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- Val Gln Cln Gln Leu His Pro His Val Leu Fro Ile Phe Val 105
- Glr. Leu Gly Ala Gln Gly Thr Ile Leu Ser Ser Glo Glu Leu Pro 100
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- The Lea Pro Thr Ser Gln Ala Gly Ala Ash Pro Asp Val Gln Asp 140
- Gly Ser Leu Pro Ala Gly Gly Ala Gly Val Ash Pro Ala Thr Gin 155
- Gly Thr Pro Ala Gly Arg Leu Ero Thr Pro Ser Gly Thr Asp Asp
- Asp Phe Ala Val Thr Thr Pro Ala Gly Ile Gln Arg Ser Thr His
- Ala Ile Glu Glu Ala Thr Thr Glu Ser Ala Asn Gly Ile Gln
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#C132 Homo Sapien

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Ser Glu Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg 35 40 45

Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala 50 55 60

Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asm Val Ile Pro

Gly Thr Fro Gly lie Frd Gly Arg Asp Gly Fhe Lys Gly Glu Lys

Gly Glu Cys Leu Ard Glu Ser Phe Glu Glu Ser Trp Thr Fro Asn 35 100 100

Tyr Lys Glm Cys Ser Trp Ser Ser Leu Ash Tyr Gly Ile Asp Ie: 112 120

Giv Lys sie Ala Giu Sys Thr Fhe Thr Lys Met Arg Ser Ash Ser 125

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 Gry Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg Thr Jer
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+:112 10a
+:112 Artificial Orghence
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